



The Relationship between  
Rising Economic Inequality and  
Educational Attainment and Achievement

Coordinated and edited by:  
Oded Busharian

Project Report



# **Inequality and Education**

## **The Relationship between Rising Economic Inequality and Educational Attainment and Achievement**

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**Oded Busharian**

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

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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-à-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 Inequality and Education Expert Team

Socioeconomic inequality is a given; its scope varies from country to country and from time to time. In democratic countries, increasing the prospect of social mobility for those born into low socioeconomic circumstances is considered a worthy goal. The education system is perceived to be a key policy tool for reducing disparities in opportunity. In recent years, there has been a discernible rise in income disparity and in parallel, a rising gap in educational opportunities. Understanding these mechanisms' reciprocal influences is important for determining effective policy.

The Spencer and the Russell Sage Foundations in the United States studied a range of issues within the context of inequality and education. The rich findings were assembled in a volume published in 2011, entitled *Whither Opportunity: Rising Inequality, Schools and Children's Life Chances*, which suggest possible explanations for the increasing impact of economic disparity on the academic achievement gaps in the US.

Inspired by the above study and with encouragement from those responsible for the US project, the aim of the Initiative activity was to delineate an evidence-based framework for policymakers to understand the relationships between socioeconomic inequality and educational opportunities and achievements in Israel and how these are distributed across the population<sup>1</sup>. Another objective was to provide information for public and professional discourse on this topic. A steering team comprised of researchers from the fields of sociology, education, economics and welfare guided the activity.

The activity had two stages:

**Stage 1:** A study session took place in December 2013 with the purpose of familiarizing professionals with the findings of the US study and holding an evidence-based discussion of the situation in Israel. Experts from abroad participated in the session, among them Prof. Richard J. Murnane, one of the two editors of the book and a key contributor to it, and Prof. Michael S. McPherson, president of the Spencer Foundation, which supported the book's preparation.

**Stage 2:** During 2015, Israeli researchers examined selected topics in this field. The activity, in the main, had the character of a learning process: In consultation with experts from abroad and stakeholders in Israel, the experts team issued calls for scientific literature reviews to be conducted, and chose the scholars to write reviews on four topics:

- Socioeconomic inequality, school/class climate and their relationship to educational achievement: Ron Astor, Ruth Berkowitz, Hadass Moore
- Trends in socioeconomic-based residential segregation/integration in Israel: Audrey Addi-Raccach, Yael Grinshtain, Hana Bahak

<sup>1</sup> The assessment of educational achievements as "an independent variable" of this activity stems from the availability of research on educational achievements and does not downgrade the importance of emotional and social variables as educational objectives in them and as factors influencing the pupils' quality of life – in the present and in the future.

- Early childhood education as a means of reducing inequality and social gaps: Research, policy, and practice: Smadar Moshel, David Levi-Faur
- Trends in resource investment in education in Israel as a function of socioeconomic status: Nachum Blass

In the spring and early summer (2015), the expert team hosted two study seminars in Israel with the participation of the reviews authors and other invited professionals. In the autumn, George Washington University, located in the US, hosted the expert team members and the review writers, together with colleagues, experts in their fields of study, from the US, to discuss the research methods and review findings.

In December 2015, the expert team held a symposium, in which the complete reviews were presented. The symposium also included a panel discussion with the participation of Members of Knesset, moderated by the director of the Knesset's Research and Information Center, Dr. Shirley Avrahami.

The Spencer Foundation and Yad Hanadiv (the Rothschild Foundation) have both been a source of advice and encouragement for the "Inequality and Education" activity.

Stage 2 of the activity was supported by the Knesset with the cooperation of the Knesset Research and Information Center.

**Expert team members:**

Prof. Noah Lewin-Epstein (chair) – Tel-Aviv University

Prof. Rami Benbenishty – Bar-Ilan University

Dr. Esther Adi-Japha – Bar-Ilan University

Prof. Yossi Shavit – Tel-Aviv University

Dr. Analia Schlosser – Tel-Aviv University

**Academic coordinator:** Oded Busharian

Professor Fadia Nasser-Abu Alhija of the School of Education at Tel Aviv University and Professor Moshe Justman of the Department of Economics at Ben-Gurion University of the Negev where members of the expert team during stage 1 of the project.

## Acknowledgements<sup>2</sup>

In the two years that have passed since the beginning of Stage 1 of the activity, the team organized three workshops for colleagues and a meeting for practitioners, all held in Jerusalem, another meeting at George Washington University, and a symposium, open to the public, in Jerusalem. At each one of the meetings, we – the learning activity participants – were able to learn, deliberate, and receive feedback from academicians and experts on education that see the topic of equality of opportunities in education as a top priority. These experts happily came to the meetings and contributed of their time and their knowledge with no remuneration, in order to promote a better understanding of the topic. Many others helped the team's work behind the scenes organizing, coordinating, sharing materials, and more. In this part of the report, I wish to thank everyone who contributed to and assisted the expert team's work, with the learning activities, and with writing this document.<sup>3</sup>

First, obviously, I would like to thank the expert team's chairperson, Professor Noah Lewin-Epstein of the Department of Sociology and Anthropology at Tel Aviv University, and the expert team members: Dr. Esther Adi-Japha of the School of Education at Bar-Ilan University, Professor Rami Benbenishty of the school of Social Work at Bar-Ilan University, Dr. Analia Schlosser of the School of Economics at Tel Aviv University, and Professor Yossi Shavit, of the Department of Sociology and Anthropology at Tel Aviv University. I convey our gratitude to them for their dedicated, pleasant and wise guidance all through the activity. All that was good in the activity and meetings was due to them, and if there were faults and difficulties, I alone am responsible for them. This is also the place to thank Professor Fadia Nasser-Abu Alhija of the School of Education at Tel Aviv University and Professor Moshe Justman of the Department of Economics at Ben-Gurion University of the Negev, who were expert team members during the first phase of the activity. I also thank Professor Justman for the introduction he presented at the meeting of colleagues held in June 2015. His remarks also appear here in Appendix I.

On behalf of myself and the team, here, we want to thank the authors of the scientific literature reviews which formed the backbone of this activity (and their presentations provided the backbone for the learning workshops): Professor Audrey Addi-Raccah of the School of Education at Tel Aviv University, Dr. Yael Grinshtain of the Open University and Ms. Hana Bahak, also of the Open University, who wrote the review on Trends in socio-economic segregation\integration in place of residence. We thank Professor Ron Astor of the School of Social Work and the School of Education at University of Southern California, Dr. Ruth Berkowitz of the school of Social Work at Haifa University of the Negev, and Ms. Hadass Moore, a doctoral student at the University of Southern California, who wrote the review on the subject of the relationship between inequality in

<sup>2</sup> The titles and positions held by those we acknowledge here are valid for the period in which the events mentioned took place

<sup>3</sup> Some of those mentioned in the Acknowledgements contributed to the team's work on more than one occasion although their name appears in this section just once. Naturally, we thank them for each time they joined the effort and helped the team's work.

socioeconomic features and classroom and school climate, and their link to academic achievement. Dr. Smadar Moshel who wrote the review on the topic of early childhood education as a means to reduce inequality and social gaps – research, policy and practice and to Professor David Levi-Faur of the School of Public Policy at the Hebrew University of Jerusalem who guided her in writing of the review. We would like to thank Mr. Nachum Blass, senior researcher at the Taub Center for Social Policy Studies in Israel, who wrote the review on the topic of trends in investing resources in education by socioeconomic status – public investment, third sector investment, and household investment.

A big thanks goes to Prof. Menachem Ya'ari of the Hebrew University of Jerusalem, the chairman of the Initiative's steering committee, for his helpful suggestions and for his guidance throughout the activity. Among his other contributions, Prof. Ya'ari opened the conference and the three seminars the team conducted.

Secondly, we would like to thank three experts from three organizations in the United States who, all through the activity, accompanied it with advice and action; cooperation with them throughout the activity enabled the research to reflect international standards. Professor Michael S. McPherson, who served as president of the Spencer Foundation during the time the activity took place, supported us with his good advice when the activity was just starting out, came to Israel for the first seminar to share his experience with us, and was among the respondents at the close of the Washington meeting. Professor Richard Murnane of Harvard University in Boston, a leader of the Whither Opportunity project in the U.S., assisted us all along the way with his good advice and even travelled twice to Israel to participate in meetings and to hold discussions with the expert team. Without his close accompaniment, the activity could not have taken place at all, and if it had it would have been much less successful. Special thanks to Professor Michael Feuer, dean of the School of Education and Human Resources at George Washington University who, among his other contributions to the Initiative for Applied Education Research (space prevents us from listing them all) was one of the initiators of this present activity and helped us with judicious advice, organized the meeting in Washington, and spoke at the meetings that took place in Israel.

In addition to the support of Professors Murnane, McPherson and Feuer, we enjoyed the assistance of several experts and administrators from George Washington University in the U.S. whose contribution to the activity was invaluable. We convey our sincere appreciation to Professor Sandy Baum and Professor Josh Glazer who participated and contributed of their knowledge (each in their own area of expertise) in the first workshop we held in December 2013. Later on, Professor Glazer also responded to one of the literature reviews in the Washington workshop.

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As mentioned, the Knesset's Research and Information Center was an important partner to this activity. On this account, we thank Dr. Shirley Avrahami, Mr. Yuval Vergen, and Ms. Etti Weissblei

of the Knesset's Research and Information Center and the Knesset staffmembers who enabled this cooperation to take place. Here, we would also like to thank the staff of Yad Hanadiv, starting with Mr. Ariel Weiss, Yad Hanadiv's executive director, Mr. Gal Fisher and Ms. Efrat Degani-Toperoff for the warm relations and good advice all along the way. It is also important to thank the Spencer Foundation and their staff members for their significant support and encouragement. Without these partners, the activity would not have gotten off the ground.

At the seminar held in September 2015 at George Washington University, the review authors (and we too) were fortunate to receive responses from researchers at the forefront of research in their field worldwide. Our gratitude goes to these researchers: Professor Adam Gamoran, president of the W.T. Grant Foundation, Professor Ofer Malamud of the Harris School of Public Policy at the University of Chicago, Professor Marta Tienda of the Department of Sociology at Princeton University, Professor Michael Hout of the Department of Sociology New York University, Prof. Colin Green of the School of Education and Human Resources at George Washington University, Professor Dorothy Espelage of the Department of Educational Psychology at the University of Illinois, and Dr. Jennifer Frey of George Washington University.

It is important to us to thank those who presented and participated in the learning seminars. We thank the presenters at Stage 1 of the activity (the meeting held in December 2013): Dr. Ayman Agbaria of the Department of Leadership and Policy in Education at the University of Haifa, who was also a respondent at the symposium which concluded the activity, Dr. Yariv Feniger, of the Department of Education at Ben-Gurion University of the Negev, who also participated in the learning seminar in June 2015, Dr. Hagit Glickman, executive director of the National Authority for Measurement and Evaluation in Education, who also maintained ongoing contact with us throughout the activity, Professor Daniel Gottlieb, deputy director for research and planning at the National Insurance Institute, who helped us all through the activity and even participated in the seminar held in Washington, Mr. Dudi Mizrahi, Division director, Economics and Budgeting Administration in the ministry of education, who also responded to one of the drafts presented at the learning seminar in June 2015, Dr. Dimitri Romanov of the Central Bureau of Statistics, Professor Josef Zeira of the Department of Economics at the Hebrew University of Jerusalem, and Mr. Noam Zusman and Mr. Shai Tzur of the Bank of Israel's Research Division.

We thank those who responded to the review drafts presented at the colleagues' seminar in June 2015. The feedback we received helped us immeasurably in improving the reviews. We therefore thank Ms. Sima Haddad, director of the Preschool Education Division at the Ministry of Education, Ms. Einav Luke, director of the Assistance and Prevention Programs Division at the Psychological Counseling Service at the Ministry of Education, Prof. Miriam Rosenthal of the School of Education at the Hebrew University, Dr. Hana Sweid, head of the Arab Center for Alternative Planning, who formerly served as a member of Knesset from the Hadash party and its chair, Prof. Yaacov Yablon, deputy director of the School of Education and head of the Teacher Training program at Bar-Ilan University, and Ms. Meirav Zarbiv, director of the Research and Development Division, Experimental Schools and Innovations at the Ministry of Education. Many thanks to the respondents to the final review versions presented at the closing symposium

of Stage 2 of the activity (December 2015): Dr. Maya Choshen of the Jerusalem Institute for Israel Studies, Ms. Noa Heymann, manager of the Education Sector in the Budget Division, Ministry of Finance (who also participated in the December 2013 meeting), Ms. Hana Shadmi, head of the Ministry of Education's Psychological Counseling Service. Special thanks to the Members of Knesset who participated in the round table discussion which concluded the symposium: MK Dr. Yousef Jabareen of the United Arab List, MK Yakov Margi, of Shas, chair of the Education Committee, and MK Professor Manuel Trajtenberg of the Zionist Union. The responses received at the symposium are an important part of the public good we are attempting to create within the framework of our work, and they are also an important part of this concluding document.

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The team of experts would like to thank Mr. Gadi Levin, the CFO of the Israel Academy of Sciences, and Dr. Avital Darmon, the director of the Initiative for Applied Education Research, and the Initiative's team – Ziva Dekel, Reut Issachar and Ada Paldor, whose efforts, time and talents were critical in creating this report and for the work of the committee in general.

#### **In Memorium**

The Initiative for Applied Education Research mourns the passing, in December 2015, of Professor Ruth Klinov of the Department of Economics at the Hebrew University of Jerusalem. We are grateful for her contribution to the Initiative all throughout the years and her contribution to the learning process. Prof. Klinov accompanied the learning process from its inception in the planning stages, contributed of her broad and well-established knowledge in the field and was also among the respondents at the learning seminar in June 2015.

#### **We give our thanks to all.**

The report underwent the customary process of independent peer review. The report author thank the reviewer, who helped ensure its clarity, its quality and its independence. Responsibility for the report's contents rests entirely with the editor.

Oded Busharian, academic coordinator

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## **Introduction:**

# **Economic Inequality and Lost Opportunities for Intergenerational Mobility**

The striving for equality of opportunity in society, in general and in education, in particular, is a fundamental notion accepted by the vast majority of the public. However, the relationship between this ideal and the possibility of its realization is complicated and raises many issues. The deeper one enters into the issues, the less clear the answers are, and consensus regarding the concrete meaning of “equal opportunities” diminishes. Without entering into the complexity of that discussion, it should be noted that there were four assumptions made leading up to the activity whose fruits are presented here today: the first assumption is that equality of opportunity is a desired state – an ideal. It does not exist in any reality. It is right that the idea of equality of opportunity be used as the compass to guide public policy even if it is obvious that it cannot be fully realized. The second assumption, optimistic, it must be said, reflects the belief in the education system’s mission and ability despite the many complexities and limitations it faces. Through appropriate activities, the system can reduce the distance between the ideal of “equal opportunities” and the actual distribution of opportunities.

The third assumption, and the reason why the topic we address here is perceived with urgency, is that the growth in economic gaps in Israel during the last three decades has effectively reduced the ability to offer equal opportunities in access to education and in fulfilling the potential this holds. In other words, the high level of inequality makes it difficult to reduce the correlation between Israeli families’ SES status and their children’s achievements. The fourth assumption, and the one which essentially drives our work, is that through systematic research it is possible to identify barriers and to specify methods that will impart more and better opportunities for disadvantaged populations, and thus provide the education system with knowledge and tools in order to improve processes and reduce societal disparities. In this context it is worthwhile to mention that beyond the great complexity of this issue, only meager data is available in Israel and as a result, it is difficult to systematically examine long-term changes. Although cooperation between different entities working to create a relevant database is advancing, the process is just at the beginning and the team views as one of its objectives, specification of the areas in which there is a need to collect, pool and make data available to improve the research in the area.

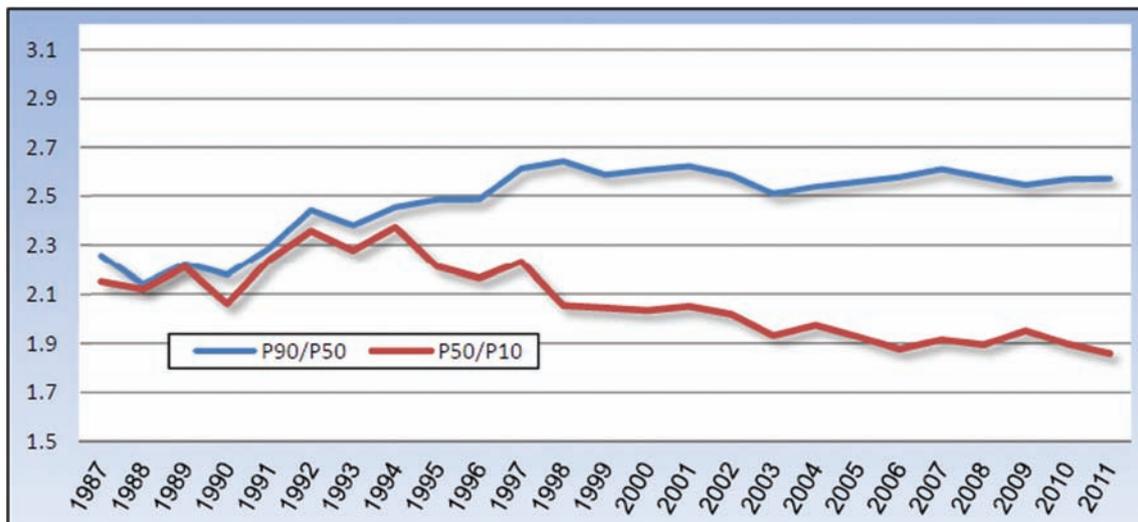
The Introduction section is comprised of three brief sub-sections. It begins by describing trends in economic inequality in Israel. The second section addresses the question of why we should be disturbed by the increase in economic inequality. The third section presents the difficulty facing the education system which must do its work in an environment characterized by a high level of economic inequality. Taken together, these sections describe the need to implement changes in the fields discussed in the literature reviews that appear below, the difficulties they involve and the contribution they can potentially make.

## A. Socioeconomic Inequality in Israel

The assertion that Israel is one of the less egalitarian among developed (OECD) countries is known and established and there is no need to expend additional words on the subject. Data from 2010 and 2011 show that out of 34 OECD countries, in only four or five of them was the inequality in disposable income higher than in Israel. At the beginning of December 2015, with publication of the 2014 Report on Poverty, we received another reminder of the large gaps in Israel. According to the report, 19% of families in Israel, and 31% of the children, live in poverty (National Insurance Institute, 2015). The data published in the report point to the scope of poverty among children in Israel, which lands us in the worst position among the OECD countries, a place we share with Turkey.

Though it appears that we have already become accustomed to the high poverty rates, the social protests of 2011 raised awareness of another phenomenon connected with economic inequality – the erosion of the middle class. The erosion process receives tangible expression in a recently published study by two economists, Ofer Cornfeld and Oren Danieli, which appeared in the *Israel Economic Review*. It is an in-depth study of economic inequality in Israel covering 25 years, from 1987 to 2011. One of the important contributions of their work is that they examine the changes that took place at the high end of the income distribution separately from changes at the low end. This analysis of trends in inequality facilitates a better understanding of the economic processes the Israeli economy has been undergoing during recent decades (Cornfeld & Danieli, 2015).

**Figure 1a: Changes in Hourly Wage Decile Ratios: 1987-2011**

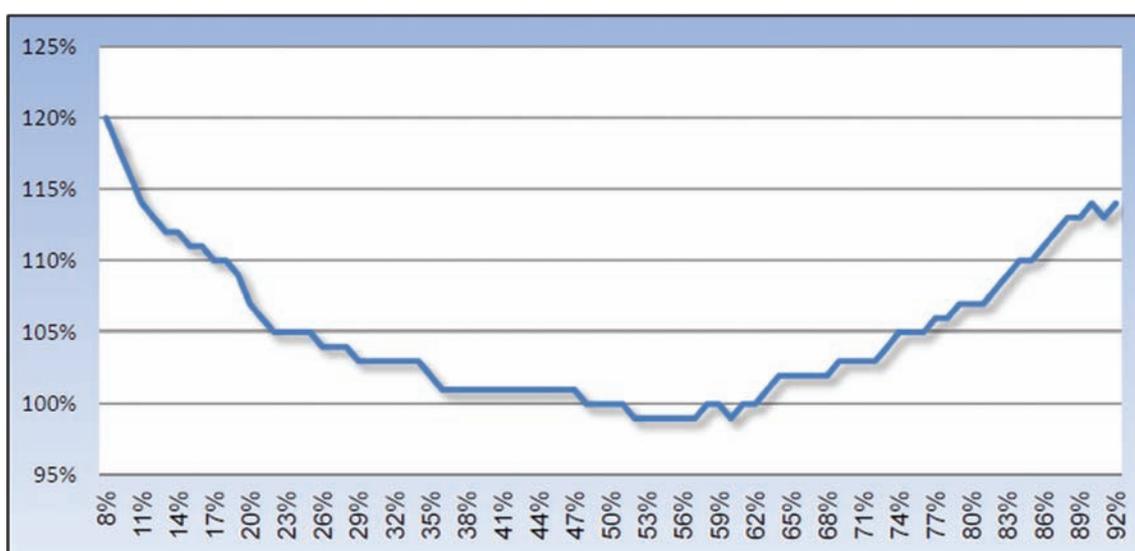


Source: Cornfeld & Danieli, 2015

In Figure 1a, the trends in the ratio between the wage of the top decile and the median wage (90/50 – the blue line), can be seen, and in a separate curve, the ratio between the median wage and the wage of the lowest decile (50/10 – the red line). The curves clearly plot the process of

polarization – on the one hand, the growing gap between the rich and the rest of the population, and on the other, the narrowing gap between those located in the middle of the distribution and those at the bottom. In Figure 1b, the source of this phenomenon can be seen. The wage percentiles appear on the horizontal axis and the vertical axis shows the change in percentage of the real wage from 1987 to 2011. We can see that the (real) wage at the edges of the distribution rose significantly as compared to the wage in the center of the distribution. That is, the real wage of the middle class (around the median) has more or less remained frozen during the period in question, while the real wage of the rich and the poor has grown. It appears that the middle class has not disappeared but the income of some has become similar to that of economically weaker groups. Clearly, the high level of economic inequality does not end in poverty, as difficult as that is, but has implications for, and affects, the life chances of broad swaths of Israeli society.

**Figure 1b: Changes in the Percentile Hourly Wage vs. Median Hourly Wage: 1987-2011**



Source: Cornfeld & Danieli, 2015

## B. Why Should Extreme Inequality Disturb Us?

In his book, *A theory of justice* (2009), the philosopher John Rawls presents a number of reasons for the importance of addressing the concept of equality and its social significance.

One explanation is articulated along moral lines. He states that "...It may be expedient but it is not just that some should have less in order that others may prosper." (Rawls, 1971:15). Nothing compares to the Report on Poverty in demonstrating this dilemma and refining the questions of what kind of society we want to live in, and whether the fragile tapestry of Israeli society is coming apart as we give up on solidarity with society's disadvantaged.

In contrast to the first reason, which is mainly moral or ethical, the second reason is pragmatic and states that socioeconomic disparities tend to encourage political inequality and increase the

danger of many living lives that are not as good as they could be. In this sense, high inequality endangers democracy and the freedom that many view as a basic right. Indeed, Wilkinson and Pickett's (2009) research demonstrates the insight that high levels of inequality erodes trust in society and causes many negative phenomena, from high morbidity to violence and crime.

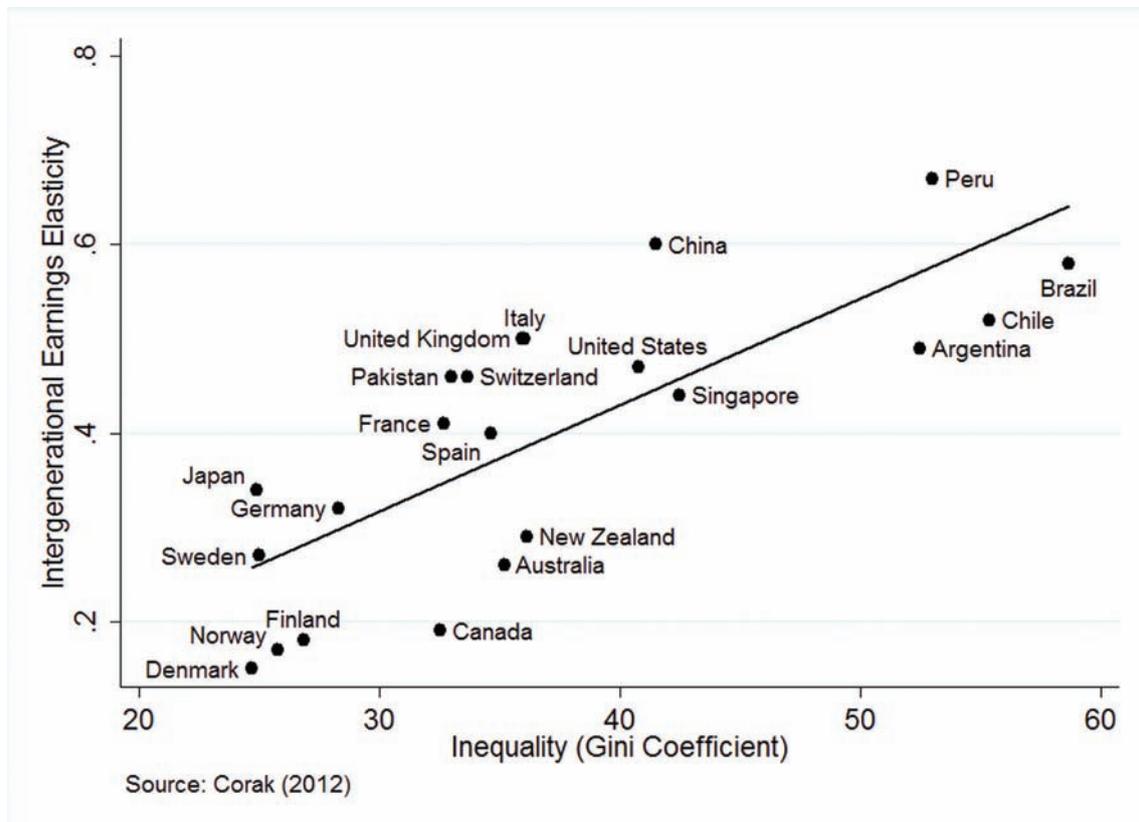
The third reason is especially important for the topic this activity addresses – the argument that inequality may lead members of more disadvantaged groups – those that suffer from lack of economic and political resources – to be perceived as inferior in their own eyes as well as in others' eyes. Socioeconomic gaps, particularly when they are transmitted from one generation to the next, can potentially create injustices and an atmosphere that may lead to systemic missed opportunities to realize better life chances for weaker groups in the population. It is thus not surprising that in addition to equality of liberty, Rawls stresses effective equality of opportunities as a basis for what he calls justice (or justice as fairness).

One of the ways of concretely defining the idea of equality of opportunity is by examining intergenerational mobility or lack thereof. A society in which the life chances of one's descendants are firmly determined by the family of origin's place within the social fabric is a society without mobility. Social inequality is duplicated from one generation to the next. If, for a moment, we imagine a society in which the life chances of offspring is absolutely disconnected from the characteristics of the family into which they are born, we would expect but a weak relationship between the family of origin's SES and their children's SES. In such cases, we can speak of high intergenerational mobility. In all economically developed societies we find a considerable degree of intergenerational mobility and at the same time, clear patterns of continuity between the family of origin's SES and their offspring's education and income (Erikson & Goldthorpe, 2002). The aspiration of those that advocate equal opportunities is to, as much as possible, narrow this sort of intergenerational continuity by increasing the chances of children from the lower part of the stratum to reach high levels of education and income.

### **C. The Relationship between Socioeconomic Inequality and Intergenerational Mobility**

What do we know about the relationship between high levels of economic inequality and intergenerational mobility? In the opening sentence of their book entitled, "From Parents to Children – The Intergenerational Transmission Advantage" John Ermisch et al. write that of all the potential outcomes of growing economic inequality, there is nothing more disturbing and more complicated to research than the possibility that growing inequality will, in the long run, lead to reducing the degree of equal opportunity and reducing intergenerational mobility (Ermisch et al., 2012). In part, this claim is influenced by the series of studies conducted by the economist Miles Corak, which made a significant impact among decision-makers. Using comparative data from a number of countries, he examined the relationship between the extent of economic inequality and the strength of the correlation between parents' income and that of their children (Corak, 2013). The findings are presented on a graph that plots each one of the countries along these two axes.

**Figure 2: The Relationship between a Country's Income Inequality and the Strength of the Correlation in Earnings between Parents and Offspring**



The horizontal axis in Figure 2 reflects the degree of economic inequality in the country, which is measured by the Gini coefficient.<sup>4</sup> The vertical axis shows the strength of the intergenerational relationship with respect to income. The higher the value, the greater the correlation between the parents' income and that of their children. The pattern emerging from Figure 2 shows that countries where economic inequality is especially high (the horizontal axis) are the countries in which there is a high correlation between parents' income and their offspring's income. In other words, these countries have less intergenerational economic mobility and disadvantaged populations have less access to opportunities and less ability to fully exhaust the opportunities they do have.<sup>5</sup> The pattern displayed in Figure 2 has been named the Great Gatsby Curve (GGC). It is a label full of irony in that Jay Gatsby, the hero of F. Scott Fitzgerald's tale, was the epitome of social mobility: his origins were in the lower class, and having made his fortune smuggling alcohol during the Prohibition era in the U.S., he ultimately became a member of Long Island's high society. Although some researchers occasionally voice criticism regarding the degree of equivalence of measures and the validity of cross-country comparisons, it appears that consensus

<sup>4</sup> The Gini coefficient is a measure of income inequality in which a score of 0 obtains when distribution is equal (everyone has the same income) and a score of 100, when all income is concentrated in one person's hands.

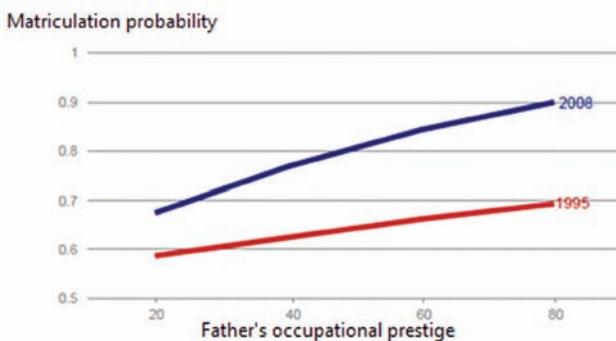
<sup>5</sup> It is important to note that the relationship between a high degree of economic inequality and a low degree of social mobility is based on an empirical correlation of cross-sectional data and does not indicate a causal mechanism tying these phenomena together.

is growing with reference to the relationship between high levels of economic inequality and the lower rates of intergenerational mobility – that is, between high levels of inequality and low levels of equality of opportunity (Erikson & Goldthorpe, 2002).

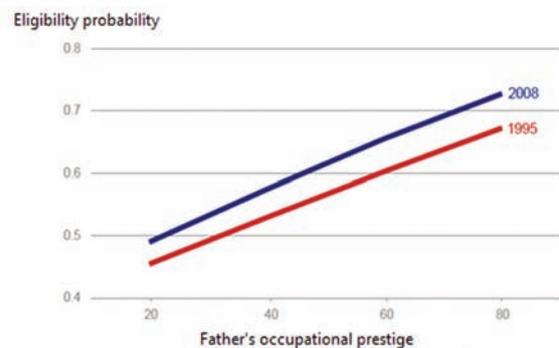
When speaking of equal opportunity, most researchers and others involved in policy making are, first and foremost, referring to access to education – for the simple reason that in the knowledge and technology society in which we live, education is the most significant factor in determining individuals’ life chances. It is thus important to emphasize that research findings accumulated over the years indicate that the correlation between parents’ SES and their children’s life chances mainly reflects the fact that educated parents manage to transmit their educational advantage to their children (Hout & Diprete, 2006). These are advantages that offspring can later convert into their own economic and social attainments (see, for example, Jerrim & Macmillan, 2014). In this context, it is important to mention some of the few existing findings in Israel that have emerged from the research of Bar-Haim, Blank & Shavit (2013), published by the Taub Center, regarding the intergenerational maintenance of gaps.

By combining data from the censuses of 1983 and 1995 and from 1995 with 2008, the researchers examined the degree of association between the educational attainments of young people in their 30s with their families’ SES, measured using the prestige level of the father’s occupation. The study’s findings are described in Figures 3a and 3b. The horizontal axis in the two figures shows the young peoples’ family background, as reflected by the father’s occupational prestige (values on the scale range from 0 to 100); 100 reflects high societal prestige. The vertical axis shows the probability of a typical high school student achieving a matriculation certificate (Figure 3a) and from among those receiving a matriculation certificate, the probability of attaining a Bachelor’s degree (Figure 3b).

**Figure 3a: Probability of Matriculation Eligibility as a Function of Father’s Occupational Prestige: 1995, 2008**



**Figure 3b: Probability of Bachelor’s Degree Attainment as a Function of Father’s Occupational Prestige: 1995, 2008**



\* According to the ISEI Index, measurement range: 100 (high) to 1 (low)

**Source:** Bar-Haim, Blank & Shavit, Taub Center

**Data:** Central Bureau of Statistics (processed by authors)

The findings show that the probability of receiving a matriculation certificate and a Bachelor's degree increases the higher the prestige of the father's occupation. This is especially prominent with respect to obtaining a Bachelor's degree. What is most disturbing of all in the findings is that not only did the relationship between the families' SES and their offspring's educational attainments not diminish between 1995 and 2008, but it became somewhat stronger (this is especially striking with respect to matriculation eligibility).

#### **D. Education and the Education System in a Society Characterized by a Very High Level of Socioeconomic Inequality**

Before turning to different aspects of the education system where, in our judgment, progress towards narrowing gaps in equality of opportunity can be made, it is important to emphasize the education trap. The avowed promise of equality of opportunity creates high expectations, while the high level of socioeconomic inequality works against realizing these expectations. From this perspective, the education system can be compared to a boat society launches into the river, expecting it to advance against the current. It will only be able to overcome the current if its motor is strong enough. In this sense, it must be recognized that the problem of equality of opportunities is Israeli society's problem as a whole and we, like many other societies, tend to deposit it on the education system's threshold. Just before we proceed to discussing the education system, it is important to mention these things and to acknowledge the societal context in which the system does its work, and that practically speaking, every education system in society is highly unequal.

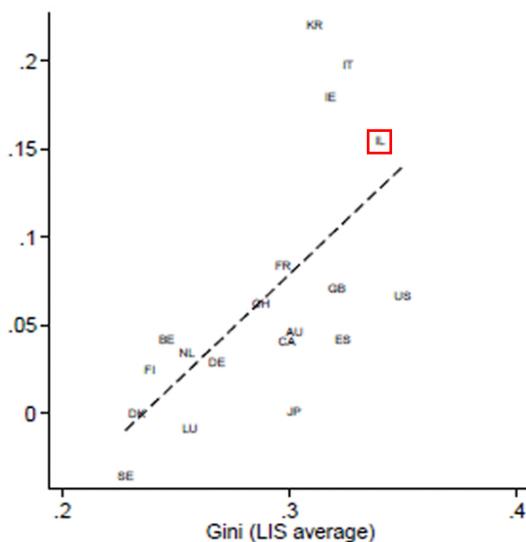
It is customary to think about education as a collection of values, knowledge and tools that serve the young person when they join adult society. In this sense, education is meant to contribute to making a better society and at the same time, to strengthening the individual's chances in life (Goldthorpe, 2014). Education, however, has another important characteristic – a relative characteristic. Education is the type of resource that is contingent upon the position of the educated person relative to others; this is known as the “positional good”. When people aspire to attain the most highly prized and paid jobs, the chances of an education system graduate are determined not only by his education but also, and even chiefly by, the educational distribution of others. The higher the number of candidates whose education is lower than his, the greater his value in the job market, a value which determines his life chances. This attribute feeds the aspirations of students and their parents to gain better and higher education than others for the purpose of being in a better position to succeed. The upshot here is that expanding education alone does not necessarily lead to (relative) improvement of opportunities for disadvantaged groups in society because it does not neutralize the advantages strong SES levels in society have; advantages that are expressed through parents' education, cultural capital, financial resources, etc., which influence educational attainments.

The rise in economic inequality in society makes the above-described dynamic more extreme since particularly high inequality has implications for the opportunities and risks faced by families concerned with the future of their children. The relative increase in income at the top of the distribution means that for the successful, compensation is growing along with their advantage

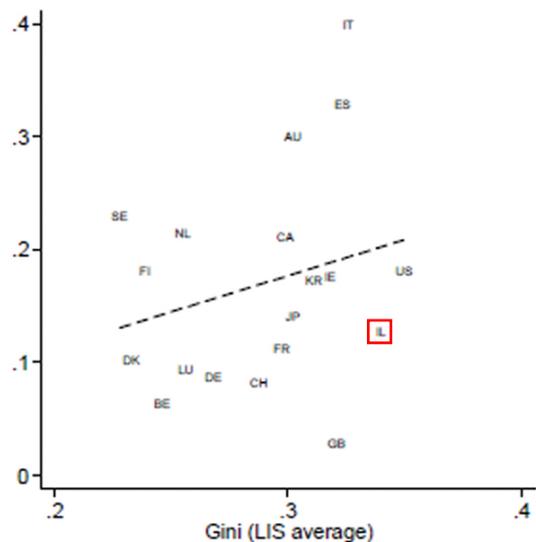
in educational attainment. The other side of the coin is that for those who do not succeed in breaking into the highest 10 or 20 percent, fulfilling the goal of a comfortable life becomes more difficult. The closer a society comes to a “winner takes all” configuration, the greater the motivation of families to do more in order to ensure that their children possess the tools needed for success. Even if the motivations of families are similar, their possibilities are not. Large financial disparities between families means differential prospects for helping children (Lewin-Epstein, 2000). Moreover, affluent parents and the social strata to which they belong are likely to be less patient with the education system’s goals of working to narrow gaps. It is thus important to stress that while education is meant to serve as a route to mobility for disadvantaged groups, at the same time, it hands an advantage to affluent groups (Rotman et al., 2015).

Jerrim and Macmillan’s (2014) findings are interesting in this context. They examined data from the PISA reports made by students regarding informal assistance with their studies, and compared it to the level of economic inequality in different countries. Their findings are presented in Figure 4a and Figure 4b. The horizontal axis in both figures indicates the degree of economic inequality in the country, using the Gini coefficient.<sup>6</sup> The vertical axis in Figure 4a represents the gap between children whose parents have post-secondary education and children whose parents did not complete high school, with respect to the frequency of help they receive with their schoolwork from their parents or other family members. The vertical axis in Figure 4b reflects the gap between children from families with more education and with less education with respect to the frequency of paid tutoring help they receive.

**Figure 4a: The Relationship between Inequality in the Country and the Gap in Frequency of Receiving Help with Schoolwork from Family Members: Families with More Education and Less Education**



**Figure 4b: The Relationship between Inequality in the Country and the Gap in Frequency of Receiving Paid Private Tutoring: Families with More Education and Less Education**



Source: Jerrim & Macmillan, 2014

<sup>6</sup> Although, theoretically, the coefficient’s scores range from 0 to 1, the scores presented in the figure range from 0.2 to 0.4.

In both figures, it can be seen that the gap is larger as the level of inequality in the country is higher. Although in all countries, children of more highly educated parents report more parental help with their schoolwork (Figure 4a), the correlation between economic inequality in the country and disparities in help received from family members with schoolwork is rather weak (Spearman's rank correlation of 0.20). The data in Figure 4b, however, indicate a high correlation (Spearman's rank correlation of 0.73) between the degree of economic inequality in different countries and the gap in the frequency of receiving private tutoring between students with highly educated parents and students with less educated parents. It is also worthwhile to pay attention to Israel's position in these figures (denoted by "IL"). In Figure 4a, which relates to the frequency of receiving help with schoolwork from family members, the disparities in Israel are not very high. It appears that significant differences in parental motivation do not exist between more highly and less highly educated parents. In Figure 4b, which relates to paid tutoring help, Israel is located in a very high position with respect to the gap between students whose parents have post-secondary education and students with less educated parents. Thus, educated parents (who are, on average, also more affluent) can provide more help with schoolwork through paid tutoring and in this way, maintain the socioeconomic gaps from one generation to the next.

It is important to clarify that the gaps in inputs and in children's scholastic achievements are not only the result of steps taken by parents who utilize their resources in order to ensure their children's future. The great difficulty is that the education system is expected to work toward the social goal of greater equality of opportunity while diverse social, political and economic entities labor to achieve other goals, sometimes even contrary ones. Separatism, privatization of activities, use of political power to ensure resources from affluent sectors in the population will not be diminished – all these challenge the education system, as recently described by Yuli Tamir in the book she wrote detailing her tenure as education minister (Tamir, 2015).

Can the boat advance upstream? The education system will not solve all the problems of inequality in Israeli society and, no one presumes that the system will be able to do so. But, in light of the things described above, and despite the constraints, we need an education system that will implement the right social policy to reduce inequality. We must acknowledge that we, as a society, have no better means for promoting equality of opportunity. At its best, this system can change the course of young people's lives and give those from disadvantaged backgrounds a real chance. The literature reviews presented below place these topics on the public agenda and also provide the education system with better and more documented tools for use in those areas in which it has the possibility of influencing and promoting equal opportunities. More than a few studies have demonstrated that given a deliberate policy oriented toward improving opportunities for disadvantaged populations and allocating the resources needed to realize them, the education system can create change.

## **Review Abstracts, responses, and panel discussion from the symposium**

- The following pages include abstracts of the scientific reviews commissioned for the activity, and responses to the reviews presented during the December 2015 symposium. We also present responses from the discussion with symposium participants, followed by a summary of the panel of Knesset members from the symposium.
  
- All review abstracts were edited (in Hebrew).
  
- The authors' full reviews (in both Hebrew and English) can be found on the Initiative's website under "Background Materials".
  
- The presentations, as well as video recordings of the symposium lectures, can also be found on the Initiative's website under "News & Events."

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**The views expressed in the following pages are those of the authors and speakers. The responsibility for the content lies with them. Any recommendation or view expressed should not be considered the view or recommendation of the steering team.**

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## **Early Childhood Education as a Means for Reducing Inequality – Research, Policy and Practice**

*Smadar Moshel*

Policymakers, researchers and educators are in agreement with respect to the importance of the initial period of life for children, in general, and for children from disadvantaged families, in particular. There is much research to support the claim that gaps in language, emotional development, and self-regulation are already present at the youngest ages. The need to invest more resources in this period of life (to “flip the triangle”) has become evident to all, as has the potential contribution of quality childcare and preschool to emotional, cognitive and motor development of toddlers and children, as well as their intrinsic economic benefit.

The question remains, however, which policy actually leads to the desired results for toddlers and children? And, whether, how, and to what extent is there alignment between the policy in Israel and policy proven to support better outcomes for children as well as equality of opportunity? The review seeks to answer these two questions in light of Israel’s early childhood policy for children aged birth to six (0-6) years.

### **Methodology**

The first chapter in this review, devoted mainly to the field’s research literature, cites findings from nine wide-ranging literature reviews published from 2000 to 2015. The reviews cited concentrated on findings from prominent research studies that addressed the question of the contribution of early childhood education for ages 0-6 to reducing disparities. Due to considerations of space, in the present review, we gave preference to research based on large samples, studies using RCT (randomized control trials) methodology, and longitudinal studies. These factors guided us in placing emphasis on findings from program evaluation studies of the U.S. Head Start and Early Head Start programs, and the British Effective Provision of Pre-school, Primary and Secondary Education (EPPSE) program.

The two chapters that follow present the early childhood policy for ages 0-3 and 3-6 as they compare to the OECD countries, and examine major reforms and trends. The comparisons are based mainly on the findings in OECD reports, and in particular, the reports “Starting Strong I” and “Starting Strong II,” as well as “Quality Matters,” and the European Commission’s “Key Data on Early Childhood Education and Care in Europe,” published in 2014. The information about Israeli policy is based on reports of the Knesset Information and Research Center, government websites, and sources found in the (Israeli) National Library database.

### **Main Findings**

Following the Introduction, **the first chapter** examines the characteristics of early childhood education that were found to contribute to children’s cognitive and emotional development, and what we can learn from small-scale intervention programs as opposed to large-scale intervention

programs. Does attending an education framework for many hours contribute to achievement? And, what are the long-term effects of early childhood intervention programs? The chapter relies on findings from literature reviews conducted on the subject by the European Union, the OECD, and leading U.S. research institutions. The chapter points to the complexity typified by the field of early childhood education. It stresses the importance of the quality of intervention programs in improving the situation of children from disadvantaged families, and in particular, the importance of the blend, made up of structural quality characterized by group size, the ratio of number of caretakers to number of children, the team members' educational level, etc., and the procedural quality that emphasizes the interaction between the caretakers and the children.

The review shows that the number of research studies that followup on intervention programs for 0-3 year olds and their impact on children's emotional, social and cognitive development is significantly lower than the number of studies accompanying programs whose target group is 3-6 year old children. The findings of studies that followed intervention programs for these age groups, for example, the Early Head Start (EHS) program in the U.S., found a positive effect for quality intervention programs. For parents, the program led to their greater expression of warmth and support for their children and to less emotional detachment, more play time with children and a home environment with more abundant stimuli. The parents in the program were also more likely to be employed. Compared to children in the control group, children in the research group demonstrated better cognitive development, better language development, fewer hospitalizations, a better record of immunizations, and lower levels of aggressive behavior.<sup>7</sup> At the same time, the effect on the achievements measured was modest. With respect to children in the control group, the program improved the development of its child participants, although these children still reached lower than average achievements. A similar result was recorded in the area of literacy. In other words, the program helped reduce gaps but did not close them (Love et al., 2002).

For ages 3-6, research findings differ from one another regarding the extent of the intervention program's impact. A study that examined the impact of the Head Start program (HS) found that intervention programs have a small positive effect in the short term and in most cases, the effect dissipates by the time the children start attending school (Kresh, 1998 in Melhuish et al., 2015). Similar to EHS, HS positively influences parents and parenting, as manifested by lesser anxiety, depression and tension for parents and improved communication between parents and children (Melhuish et al., 1975). Another study's findings showed that, after controlling for the child's socioeconomic background and family variables, children who participated in preschool education had higher achievements in literacy and math at ages five and six. It was found that the effect of preschool education is greater for children from disadvantaged families (Magnuson, Meyers, Ruhm & Waldfogel, 2003). In the long term, most of the research indicates that the academic achievements of program participants in both age groups fade in the absence of ongoing programs, however, their effect is seen in the reduction of criminal behavior, a lower dropout rate from school, etc. (Schweinhart et al., 2003; Garces, Thomas & Currie, 2000; Chetty et al., 2010).

<sup>7</sup> For a detailed account of the actions taken during the intervention (for both the children and the parents) see the full scientific review.

Children from disadvantaged families are the main beneficiaries of quality intervention programs in early childhood. Yet, some of the findings show that intervention programs, especially those that focus on young ages (0-3), can have negative effects on children's behavior and on their self-regulation abilities (Magnuson, Ruhm & Waldfogel, 2007; Waldfogel, 2004).

The second chapter describes Israeli policy for early childhood education frameworks for ages 0-3 from a comparative perspective, with emphasis on OECD policy. The chapter presents the legislative and regulatory arrangements governing day care centers, their quality and their target audience. The comparison shows that Israel's daycare center policy lags behind most developed countries on quality of care measures. From the standpoint of structural measures that include group size and caretaker-child ratio, the quality of the frameworks in Israel is among the lowest in the OECD countries. Checking the Ministry of Economy information as well as the State Comptroller's report shows that in practice, the child-adult ratio is higher than the standard set by the Ministry. From the perspective of oversight and regulating the market of early childhood frameworks, Israel did not join the trend, seen in developed countries, of applying compulsory licensing and oversight for all frameworks, and today, the private sector of 0-3 early education frameworks is totally without supervision.

A number of attempts were made in the past to improve the structural and procedural quality of daycare centers and the laws regulating them. Attempts to shift to a model with a unified system of early childhood education under the Ministry of Education's responsibility failed, and the early childhood education system has remained split between the Ministry of Economy, responsible for 0-3 year old frameworks, and the Ministry of Education, responsible for frameworks for 3-6 year olds. At the same time, several reports have recommended improving the standard for daycare centers but they were not implemented (Rosenthal, 1987; Rosenthal, 2007).

The chapter then examines the extent to which existing policy supports equality of opportunity and advances the development of toddlers from disadvantaged families. The chapter indicates that for children from disadvantaged families, existing policy does not support access to the supervised system of daycare centers. Looking at the policy over a period of time shows that preference is given to children from middle class families over children from disadvantaged families. This policy is expressed through daycare center admission requirements that give priority to the mother's employment over a test of income (except in all-purpose daycare intended for children from families receiving welfare), in the Ministry of Economy's authorization to collect additional tuition from parents for additional curricular studies and, in the lack of supervision over the subsidized funds transferred to daycare centers. Nevertheless, research indicates that since 2003, the rate of children receiving a high subsidy has increased while the rate of children receiving small subsidies has declined; this reflects the greater access of children from disadvantaged families to daycare centers.

**The third chapter** focuses on preschool education policy in Israel and compares it to policy in the OECD countries. The chapter analyzes Israeli policy along two axes: access vs. quality and universality vs. progressivity. The chapter focuses on the most recent reforms led by the Ministry of Education with reference to preschool education, with emphasis on the "New Horizon" reform, the long school day, and the reform adding a second aide in kindergarten classes.

Studying the reforms shows that in the tension between access and quality, these reforms give preference to access to services as expressed in the increase in the number of daily hours spent in the preschool and in the high rate of children attending preschool settings. Nonetheless, the review shows that there are gaps between different sectors in access to services, with the Arab sector having less access. On the other end, it appears that the structural quality of preschool frameworks is relatively lower than is customary in most developed countries, and as compared to findings from the research literature. The second aide reform improved personnel standards and the teacher-children ratio in preschools, while group size has remained unchanged.

In the tension between universal policy and progressive policy, it appears that the tendency is towards universal policy, within whose framework the Ministry provides similar services to all the children in the country. Principles reflecting progressive policies are seen in the “long school day” granted to a limited number of localities and in the “Good Start” program, which is a supplemental program targeting children identified by the welfare authorities. The largest and most expensive reform in recent years – free education for 3 and 4 year olds – is, in principle, a regressive reform in that it manifests a transition from progressive policy to universal policy and transfers resources to the middle and upper classes. In the end, the second aide reform, which was meant to rely on progressive funding policy (in which rich localities fund half of the reform's cost while poor localities get fully funded by the MOE), has also been left with a weak progressive base (in which the rich localities only pay for 20% of the cost). At the same time, the research shows that children from disadvantaged families benefit more from quality education and as a result, it can be expected that they will be well-served by the reform adding a second aide. This point, however, requires extensive research.

In general, the combination of these two trends (prioritizing access over quality and universality over progressivity) does not compensate for the socioeconomic gaps between disadvantaged children and middle and upper class children. Were the policy for preschools to be heterogeneous in terms of the populace's socioeconomic status (SES), disadvantaged children would benefit. However, localities in Israel differ from one another in their SES clusters, and even in cases where there are heterogeneous localities, there are differences between the locality's different neighborhoods. Since kindergartens are mainly based in local neighborhoods, it is probable that the benefit for disadvantaged children would be small.

**The fourth and final chapter** presents the status of research on early childhood education in Israel. The chapter points to areas where data is lacking and to areas of knowledge that additional research would illuminate. In particular, the chapter points to the lack of assessment follow-ups of large-scale reforms that would examine their effects (not only their implementation or attitudes), and to the necessity of creating a broad knowledge base that would serve as a source of data for researchers.

The conclusions reached in the review show that what is common to both daycare center policy under the Ministry of Economy's responsibility and to preschool education policy is their preference for access to services, that is, price, availability, and number of hours spent in the setting over the quality of services. In apparent contrast, the importance of quality of the services

and particularly, improving the development and achievements of disadvantaged children are repeatedly stressed. This has special importance given the negative implications the research shows of, on the one hand, education that is not of high quality, and on the other, the low structural and procedural quality that typifies daycare centers in particular. The review indicates that in their present configuration, daycare centers do not provide a satisfactory response to the needs of children from disadvantaged families and new thinking is needed about daycare's target audience, ways to fund these settings, as well as ways to supervise them and other currently unsupervised education frameworks. It should be noted that although policy prioritizes access (expressed primarily through the cost) over quality, access to daycare is limited as only 23% of children in Israel attend officially-recognized daycare centers.

The preference for access over quality also exists at the Ministry of Education and is expressed in class size and by increasing the number of hours spent in nurseries and kindergartens through the "New Horizon" framework. The latest reform of adding a third aide constitutes a change to this trend and represents policy that promotes structural quality in the nurseries and kindergartens. All the same, the main test of the reform will be in its successful implementation and in its ability to translate policy to practice that will, in the end, change customary practice for the better in preschool frameworks so that it works towards advancing children from disadvantaged families.

Regarding the policy in both these ministries, the review shows that responding to Arab society's needs is more difficult. Daycare centers are not distributed throughout Arab localities in a way that reflects their proportion in the population. Compared to Jewish children, higher percentages of Arab children do not attend the preschool settings (or begin attending at a later age) under the Ministry of Education's purview; this is the case especially in East Jerusalem and among the Bedouin in their localities. Beyond what the difficulty in providing services to a population group that is part of Israeli society means, this hardship is laden with import due to the poverty that characterizes Arab society and because many of the disadvantaged children in Israel are Arab.

With respect to the daycare center policy and the preschool education policy, special attention should be paid to the way the education systems can provide solutions for children from disadvantaged families. Policy in this realm should combine progressivity, i.e., transmitting dedicated resources to disadvantaged populations, with quality necessary for improving disadvantaged children's achievements. Work with disadvantaged populations challenges both these settings since in daycare, the curriculum and the staff's professional development often depend on the level of the particular center, while in nurseries and kindergartens, the policy's element of universality is very strong. This issue can present a challenge to policymakers at both ministries.

The review closes by being cautiously optimistic regarding two processes that may lead to change in the field of early childhood in Israel. The first is an effort of the Knesset's Early Childhood Coalition, led by MK M. Trajtenberg and MK E. Alalouf to promote the establishment of an Early Childhood Authority that would be responsible for regulating the field and coordinating between the diverse players in the field. The second is the transfer of responsibility for daycare centers from the Ministry of Economy to the Ministry of Education, an issue which has once again appeared on the political and public agendas. These two developments, especially if they were accompanied

by a budget earmarked for improving the quality of services within these settings, can contribute to increasing equality of opportunity; let us hope that this is what will ultimately occur.

### **Response: Ayman Agbaria**

The literature review that was presented fully describes the complexity of the topic of early childhood education. It raises important questions regarding the issue of policy intended to bring about the desired results for children from disadvantaged groups and also comprehensively examines the extent to which existing policy supports or does not support equal opportunities.

The review focuses on two “tensions” or two types of policy with respect to early childhood education. The first is the tension between progressive policy and universal policy. Progressive policy (in education as in welfare) is that which gives priority to benefits for members of disadvantaged populations. Universal policy, in contrast, grants the same benefits to all. The second tension the review focuses on is between accessibility and quality. In a world of limited resources, investment in increasing access to early childhood education comes at the expense of improving its quality.

The last chapter of the review discusses the topic of research on preschool education. This chapter raises questions that are not simple to answer with respect to the status of data in Israel, their transparency and whether researchers have access to them. It also brings to the fore the glaring shortage of evaluation studies in Israel. A study I recently conducted examined Master’s and doctoral theses written in the Department of Education at the University of Haifa. It emerged that during the last ten years almost no research attention has been given to data from the Central Bureau of Statistics or data from the National Authority for Measurement and Evaluation in Education. This means that MA and PhD students simply do not manage, for different reasons, to initiate a program of research based on these data.

I would like to mention a number of comments or points of criticism about the review:

1. The review is situated on the edge between policy analysis (existing policy in Israel) and analysis of the need for policy (which policy is useful for reducing inequality). A clear statement is missing about the gap between useful policy and the policy in Israel. The tension between policy research and research for policy purposes is prominent, for example, with respect to the question of whether to transfer daycare centers and home-based nurseries to the Ministry of Education’s responsibility. The report did not provide a clear answer and did not thoroughly discuss the topic. It should be noted that the UNESCO Report that deals with the topic (and was cited in the review) also presents an ambiguous and dichotomous consideration – there are arguments for unifying the frameworks under the Ministry of Education’s responsibility and arguments against it.
2. A summary of lessons learned from the review is missing. Also missing is an organized presentation of the basic data that exist: ages, personnel, institutions and physical conditions, and so on. In this context, there was place to possibly also incorporate a forecast of the number of children and their needs in order to enable a sketch of future policy scenarios.

3. Consideration is missing of alternative educational institutions such as multi-purpose daycare centers, daycare networks, or home-based nurseries. In Arab and ultra-Orthodox societies, home-based nurseries are significant. Another point – there is no consideration of home schooling, a practice that exists in England and in Europe and is even subsidized in some countries. The extent of these institutions' effectiveness as compared to the more dominant frameworks such as daycare centers and preschools is not clear to us.
4. A comment on the topic of educational quality: Care must be taken so as not to allow the discussion on educational quality to become a “smokescreen” behind which to hide the “schoolification” of early education. Universal access to early childhood education is important for reasons beyond making employment for mothers possible. Disadvantaged families may lose services which they have received within the framework of daycare, which is under the Ministry of Economy's responsibility. In addition, in the absence of universal access, mothers who are not employed but are not defined as belonging to “welfare families” can fall between the cracks, neither belonging to a particular framework, nor receiving a subsidy. It is important here to note that in Arab society there are many women who do not send their children to 0-3 daycare since they are not eligible for it. On the one hand, these are women living in conditions of poverty and, on the other hand, they do not work. The current situation in which access to daycare is conditional upon the woman, her occupational status and her socioeconomic background is problematic since it harms the child's right to education. Access to quality education during early childhood must be derived from the child's right to education and not from the mother's status.

I therefore propose that we organize our thinking not necessarily around universality versus progressivity or accessibility versus quality, but around the right to education as a normative and conceptual framework – a universal right that belongs to the child and imposes an obligation upon the state to provide available education, adapted to the group the child identifies with.

5. Regarding Arab education, I believe that a review should be initiated that would focus on what can be learned about early childhood frameworks in multi-cultural contexts, in general, and among minorities, in particular. The review did point out some of the difficulties facing Arab society in developing appropriate early childhood services while relating specifically to the shortage in infrastructure and the difficulty in building new institutions. The subject is even more complex and requires consideration of diverse features such as language, culture, local government, training personnel, etc. and other important topics which should be paid more thorough attention. To conclude, a comment regarding Arab society in Israel. The government intends to vote for an investment of 9 to 15 billion shekels (depending on the calculation method) for Arab society in Israel. The importance of the program is not only that it adds budgets but that it repairs budgetary mechanisms and criteria. I hope that the program will be authorized, not only because of its economic importance but because it also has components that relate specifically to education, including training teachers and encouraging the opening of daycare centers.<sup>8</sup> Let's hope that following its authorization, the program will be implemented as it should, without bureaucratic delays and without superfluous political conditions.

<sup>8</sup> The program was indeed authorized on 30.12.2015.

## **Trends of Segregation or Integration in the Residential Environment Based on Socio-economic Status of Pupils in the School**

*Audrey Addi-Raccah, Yael Grinshtain, Hana Bahak*

### **Introduction**

This review focuses on trends of segregation by geographic areas (primarily place of residence) and the repercussions of segregation on the characteristics and output of the education system, and on the educational opportunities available to members of different social groups. The survey, which has five sections, is based on peer-reviewed articles, books/book chapters and reports by research institutions and authorities in Israel. The first section examines the trends, dimensions and scope of segregation. The second section addresses the implications and effects of segregation on the education system and its output. In the third section, we review policies and interventions aimed at narrowing the dimensions of segregation, as reported by various countries around the world, with an emphasis on the United States. The fourth section focuses on describing the situation in Israel, and finally, in the fifth section, we present a number of policy options and recommendations.<sup>9</sup>

### **The phenomenon of segregation by geographic area**

Some researchers contend that the discourse on social segregation and its repercussions is no longer relevant today (Glaeser & Vigdor, 2012). However, many studies indicate trends of residence-based social segregation. These trends require investigation and discussion, and there is a need to examine ways to contend with this phenomenon. Residential segregation is a multi-layered phenomenon that can be based on various dimensions – such as race, ethnicity, income and status – and there is often overlap between these dimensions. In the U.S., there has been an emphasis in recent years on the growth of class-based spatial segregation. In Europe, class-based segregation is moderate and attention is instead focused on ethnic-based segregation in Germany (Glitz, 2014), Holland (Musterd, 2014), Sweden (Andersson, 2014), Britain (Johnston, Poulsen & Forrest, 2015), and Belgium (Van der Bracht, Coenen & Van de Putte, 2015). There is considerable research on religion-based spatial segregation (especially in Europe), which largely overlaps with class-based segregation. In the U.S., class-based spatial segregation is explained in part by demographic changes (Reardon & Owens, 2014) related to “white flight” – that is, the white population’s economic situation enables it to move out of mixed and heterogeneous neighborhoods. Thus, city centers are abandoned in favor of suburbs, and people move from large cities to smaller communities. We also have witnessed “locked-out segregation” – the formation of homogenous communities or neighborhoods that social groups cannot join because of a lack of economic means to finance the cost of housing or as a result of mechanisms of social exclusion. This phenomenon goes hand in hand with “locked-in segregation” – a process in which a social group finds itself trapped in a neighborhood that does not attract new residents (Johnson et al., 2014). Studies also indicate that a social group can be in a situation of hyper-segregation, which

<sup>9</sup> For the inclusion criteria for the literature review see appendix 1 of the full review.

reflects multiple aspects of segregation that amplify its differentiation from the general population (Massey & Tannen, 2015). In addition to these explanations, the literature highlights a number of difficulties researchers face when attempting to examine trends and changes in the extent of segregation over time or in different places: First, there is no accepted index for measuring segregation, and different researchers employ different indices to calculate the level of segregation (De la Roka et al., 2013; Johnson et al., 2014). Secondly, studies on residential segregation focus on different periods of time. Some of the research describes the situation at a given point of time, while others are longitudinal studies that address different spans of time; this makes it difficult to conduct relevant comparisons. Thirdly, the studies on segregation analyze geographic units that differ in size, ranging from residential neighborhoods to units of states (Johnson et al., 2014; Orfield, 2014; Parisi et al., 2015).

### **The impact of segregation on the education system and its output**

From a social perspective, residential segregation is likely to affect the level of equality in education, and there are at least two reasons for this. First, the context in which individuals grow up, develop and function is liable to influence their achievements in various areas (such as employment, education and health) (Berliner, 2006, 2009; Harding et al., 2011). The second reason is that place of residence can have an indirect effect on educational opportunities via the education system and its output. Neighborhoods and residential areas constitute a significant social context for children and adults because they provide access to resources, social opportunities and interactions that influence their development (Sampson, 2001). There are many characteristics of the neighborhood/residential area that affect its level and quality, and as a result, determine its impact on the various outcomes of those living in it (Putnam, 2015) – for example, the level of crime (Deming, 2012), employment and business opportunities (Kaim, 1992; Stoll, 2005), the presence or lack of role models and peer group influence (Diez Roux, 2001; Wilson, 2012), and the range of public services and welfare services available (Putnam, 2015). Studies show that living in an affluent neighborhood for an extended period of time contributes to the achievements of adolescents due to the advantages of greater resources that support learning, and quality services for children and schools (Crowder & South, 2001; Heckman, 2008). On the other hand, residing in an area considered disadvantaged engenders a segregation process among its residents that is expressed in low income, more exposure to alcohol, drugs and violence, and family hardship. These characteristics limit exposure to educational opportunities (Flores, 2008). This effect is particularly salient when residence in the neighborhood begins at a very young age (Anderson, Leventhal & Dupere, 2014). Area of residence has an impact on educational processes in the schools since schools tend to reflect the neighborhood in which they are located. That is, residential segregation reflects and also reinforces segregation in the education system (Goyette, Iceland & Weininger, 2014; Lareau, 2014). As the literature on social segregation/integration in schools indicates, social composition (class, ethnic and racial) has an effect, at times a significant one, on students' cognitive dimensions and, consequently, also on their chances for social mobility. Moreover, studies have found a connection between school quality and housing values in the neighborhood/residential area in which schools are located (Machin, 2011; Rothwell, 2012). For example,

research has underlined the link between national test scores in schools and the value of housing in the surrounding area (Central Bureau of Statistics in Israel, 2015; Fiva & Kirkebøen, 2008). Thus, the location of a school can affect its resources and culture, learning processes, students' motivation, parental involvement, and more (for example, Silverman, 2014), and accordingly, influences the inequality among schools and their students' achievements (Bischoff & Reardon, 2013). However, it is not always possible to examine and identify the distinct and relative impact of the school or of the neighborhood, and the findings on this topic are also inconsistent. For example, a comprehensive study of neighborhoods and schools in Chicago found that the general level of neighborhood quality is likely to have a broader impact on various outputs than the quality of the school itself (Sampson, 2013). On the other hand, various intervention programs indicate that for students living in disadvantaged areas, improving the quality of the school boosts their chances of enrolling in college (Chetty et al., 2011). Many researchers today suggest the need to continue examining the impact of residential characteristics (social composition, concentration of poverty) on the school's educational processes and outcomes. There is also a need to study the possibility of a differential impact of residence on various social groups (Burdick-Will et al., 2011). Attention should also be addressed to the direct and indirect effects of residential characteristics, via the education system, on educational opportunities. This undoubtedly poses a research challenge: to determine and examine the unique impact of place of residence (Duncan & Murnane, 2011; Putnam, 2015).

### **Policies and interventions to reduce segregation**

Policymakers who are disturbed by segregation processes look for solutions to counter this phenomenon and offer better educational opportunities to minority and poor populations. The literature describes two main types of intervention: The first is demographic change implemented by moving groups of population to a different neighborhood. Intervention programs of this type focus on reducing segregation by changing the demography of the neighborhoods in which it exists. The second type of intervention is to improve the neighborhood/school through processes of change that focus on pockets of segregated minority and poor groups. Here, the emphasis is on preserving the demographic status quo, while fostering improvement within the neighborhood and/or school. The interventions can be divided into two types: internal school interventions and external ones. However, this dichotomy is not clear-cut; some of these programs are categorized as internal school programs but aim to effect changes that pertain to aspects outside of the school, whether directly and openly, or indirectly (Brighthouse & Schouten, 2011). An analysis of the two types of reforms and intervention programs (demographic change and neighborhood/school improvement) points to a number of key findings that indicate general trends for ongoing development of new and existing reforms. Demographic changes at the neighborhood level are reflected in only slight improvement in learning achievements, but are expressed in longer-term change for other variables, such as chances of enrolling in college and earnings level in the labor market (Chetty, Herndon & Katz, 2015). With regard to changes at the school level, studies show that their impact is very low without taking into account factors outside of the school, including the community, parents and neighborhood. Thus, making changes in the school itself would not

be significant without also making changes in the community and in the neighborhood (Berliner, 2009; Green & Gooden, 2014).

### **The situation in Israel**

A number of studies published recently on the situation in Israel point to processes of economic-based segregation between and within communities (Milgrom, 2015). There is also segregation based on national affiliation, religion and class in various communities. Segregation in Israel, therefore, has a multi-dimensional character that relates to both cultural-social and political dimensions, and this is also expressed in the education system. Since the establishment of the State of Israel, sector-based structural segregation has existed in the education system. The education system is composed of four prominent sectors that are distinct in their social and organizational characteristics, and segregated along lines of national affiliation (Jewish, Arab) and level of religiosity (state, state-religious, and independent education, which is predominantly ultra-Orthodox). This also has significance in the geographic space. In the Jewish and Arab education systems, for example, there is segregation based on national affiliation, combined with segregation based on geography and socioeconomic status, and this has a direct impact on segregation at the school level. Indeed, there are few schools where Jews and Arabs learn together. The same is true for state, state-religious and the various independent schools. They are distinct education systems that are segregated at the school level, which is also connected to residential segregation (for example, ultra-Orthodox neighborhoods in various cities). Therefore, the discussion on the connection between social segregation by place of residence/community and education must also address the sectoral structure of the education system.

There is scant literature focusing on the situation in Israel. A number of publications address residential segregation and others discuss segregation between schools. The evidence on the link between residential segregation and schools is very limited and is based on a number of cities. Consequently, in order to describe the current situation in Israel for this review, we processed data from the Ministry of Education's research room, from reports posted on the ministry's *B'Mabat Rachav* website, and from the Central Bureau of Statistics. The data is drawn from schools in 48 large communities that include the majority of schoolchildren in Israel. According to this data, from 2002 to 2012, there was a greater change in the degree of segregation (based on parental education) between schools than between communities, and these changes varied by sector. In Hebrew state education and in Arab education, the level of segregation increased, while segregation remained stable in state-religious education and slightly decreased in ultra-Orthodox education.

In addition to examining the level of segregation – that is, the extent to which each school reflects the composition of the sector and community – we also studied the conditions in which students study, as a function of the student population in the school. In this context, we found that segregation in Hebrew state education grew following a rise in the percentage of students studying in affluent, homogeneous settings. A similar process, though to a lesser extent, occurred in state-religious Hebrew education. In Hebrew ultra-Orthodox education there was a slight decrease

in the segregation between schools. This is likely due to the fact that the ultra-orthodox society has generally become more homogenous (and poorer) during this period. Since the index used measures the gap between the cross-schools variation and the overall population variation (in SES), a decrease in the population's variation means a decrease in our segregation index<sup>10</sup>. In Arab education, the increase in segregation between schools also reflects a change in the society as a whole. In this case it is the rise of a middle class which leads to a higher heterogeneity in society. This leads to a higher percentage of students studying in heterogeneous conditions, and a lower percentage of students learning in poorer homogeneous conditions. This also may lead to class based destiction between schools. Segregation in Israel means disparate learning opportunities, depending on education sector. Looking at the percentage of students eligible for matriculation, we can see that the (always present) achievement gap between students from upper versus lower class background (according to parental education) is defferent from sector to sector, and from one learning environment to the next. The combination of school and community social composition are indeed linked to academic achievements. However, studying in an affluent community does not necessarily boost the achievement of students from a different social background who attend a school with heterogeneous social groups. These data underline the need to examine the effect of educational processes at the community level – particularly in light of the trends of decentralization and the growing role of local government in the field of education (Addi-Raccach, 2015; Addi-Raccach & Gavish, 2010).

### **Directions for the future**

This review raised a number of directions for shaping education policy. In light of the significant sectoral distinction based on national affiliation/religion and expressed geographically, and because each sector develops as a unit in which social processes are conducted in a unique way, there is almost no interaction between the social groups. Bold leadership is needed today by policymakers in order to generate change and lower the social barriers between the different education sectors built into the education system. In addition, class-based social segregation exists within each of the sectors. Therefore, action is needed on several fronts in order to formulate a data-driven policy for reducing class-based segregation in each education sector: First, there is need to continue and promote research on manifestations of integration and segregation processes and their effects on various ecological contexts, including the impact of residence on educational processes and outcomes. Specifically, it is important to address three significant contexts that influence achievement: the education sector, the community/neighborhood where the school is located, and the school itself. Secondly, in order to understand the effects and repercussions of the various contexts, with the aim of designing data-driven policy, there is a need to combine research methods and studies; we also recommend conducting controlled experiments (see, for example, Sampson, Sharkey & Raudenbush, 2008). Thirdly, policymakers must decide on the results they seek to achieve, both in terms of the time frame (short-term or long-term) and the fields they wish to influence. Furthermore, in each of the sectors, it is essential that the changes at

<sup>10</sup> For more details on the calculation of the segregation index see appendix 3 of the full review.

the school level be accompanied by changes in the community and in the neighborhood (Berliner, 2009; Green & Gooden, 2014). In this process, the local leadership (that is, the local government and school principals) in the various communities is very important. In this context, successful educational activity of schools and local leaders should be identified, especially in communities that are socioeconomically disadvantaged, in order to learn from these cases. Finally, in order to study the connection between place of residence and diverse social processes like education, there is a need to synchronize data among various authorities. We believe that this is possible and that today there are databases in Israel that can be utilized. However, the variables and data must be clearly defined and standardized in order to ensure their compatibility. The integration of various databases would make it possible to expand and deepen existing knowledge on the connection between geographic space and education, in all of its various aspects.

### **Response: Maya Choshen**

In the disciplines I come from – geography and urban planning – addressing socioeconomic-based geographic segregation is central and widespread. What makes the above-presented review unique is the link it makes between geographic segregation and segregation in education centers, in particular, and in educational achievements, in general. If cities are mapped according to matriculation results in different urban areas on the one hand, and according to the SES characteristics of those living in those areas, on the other, it would be possible to clearly see a connection between SES level of the population in the area, and the matriculation exam results of the students living there. I will develop and expand on this using what we know about geographic segregation.

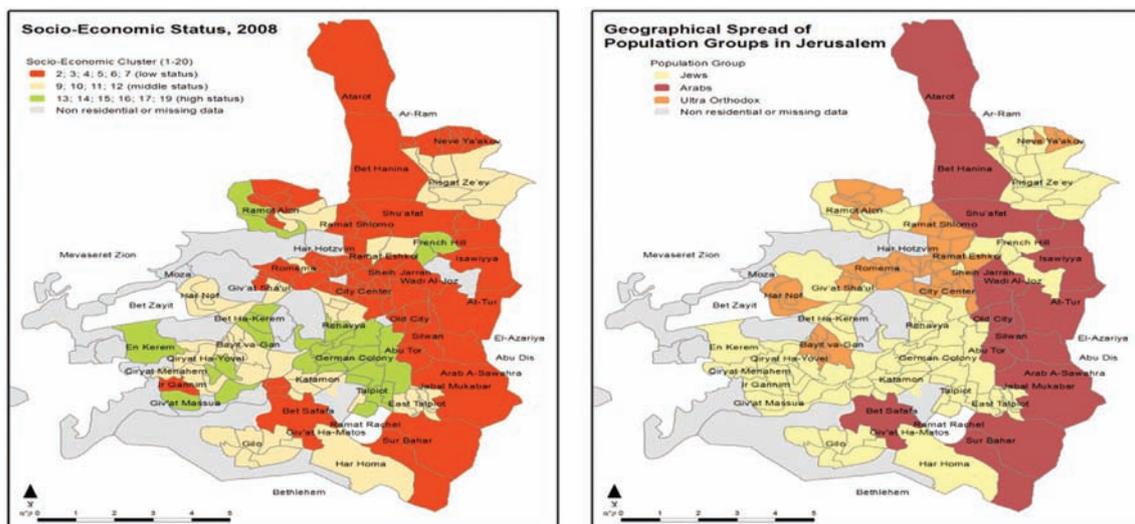
That there is population segregation between neighborhoods, between localities and between regions on a national scope, such as between the center and the periphery, is discernable. It is likely that segregation will take on different forms in different areas. So, for example, in the metropolitan Dan bloc, the city of Tel Aviv is a relatively heterogeneous city, but there is socioeconomic segregation between neighborhoods (north as opposed to south). In contrast, Hod HaSharon is much more homogeneous. Not surprisingly, big cities tend to be more heterogeneous but also within the heterogeneity there is segregation between neighborhoods and residential areas. In metropolitan areas there is often segregation between the big city and its outskirts.

The other side of Associated with segregation is, obviously, residential mobility and immobility. Geographic mobility is an expression of social mobility or (at least) the desire for such mobility. A population characterized by high SES is more mobile, as compared to a population characterized by lower SES. The former migrates longer distances than average in order to locate the most appropriate place to live. It turns out that as inequality increases, residential segregation does too and along with it, inequality in education increases as well.

With respect to the components of segregation and inequality, they change over time. For example, there is research that shows reduction of segregation between whites and blacks in the United States. However, simultaneously, another phenomenon of SES-based segregation is taking

place. In Israel too, there are different dimensions of segregation, the main ones being nationality, religion, citizenship (i.e., Israelis vs. foreign workers and asylum seekers), socioeconomic characteristics, age structure, type of religious affiliation (including within the ultra-Orthodox sector), origin (mainly among new immigrants – from the former Soviet Union or from Ethiopia), as well as length of residency in the country. The elements of inequality differ from one city to another: for example, in Jerusalem, yeshiva students are a discernable presence whereas in Tel Aviv, this population dimension is almost non-existent.

In Israel, there is great similarity between SES characteristics and sectoral characteristics. If we look at a map of Jerusalem, we see that the SES distribution is almost identical with the sectoral one (and this is true of other cities in Israel as well). The Arab sector has the lowest SES characteristics, followed by (and almost identical to) the ultra-Orthodox sector, and followed by the secular, and the national religious. It should be mentioned that the review presented here clearly distinguishes the dynamics between and within the different sectors and presents them well.



Segregation in education is related not only to the segregation in effect in neighborhoods, cities and regions, but is also connected to the prospect of bringing students in from different areas to study together. This can be demonstrated through the contrast between Tel Aviv and Jerusalem: In Tel Aviv, there is segregation between the north (where the population is affluent) and the south. This is an example of segregation in a large geographic space, a situation in which it is difficult to bring students together – it is hard to imagine low SES-background students traveling much time from the south of the city to the north. In contrast, in Jerusalem, segregation is neighborhood-based and the wealthy population groups and the poor ones live quite close to one another. Consequently, the chances of bringing these two groups together is greater.<sup>11</sup>

<sup>11</sup> The original response included information about the state's and the various local authorities' investment in education. Since the review of Nachum Blass (whose abstract appears on pages 46-41 of this document) includes this same information, we have shortened this aspect of the response and expanded other parts.

## **The Links between Socioeconomic Background, Inequality, School Climate, and Academic Achievement**

***Ron Astor, Ruth Berkowitz, Hadass Moore***

Gaps in academic achievement between students of different ethnic and socioeconomic status (SES) backgrounds exist worldwide. Studies show that these gaps have far-reaching, negative implications for individuals and society.

Researchers have pointed to the various ways in which schools can be successful in effectively improving the academic achievement of students from lower SES backgrounds. Oft-discussed factors that raise student academic outcomes in low SES schools are positive school climate and classroom climate.

Supportive school and classroom climates positively influence academic outcomes of students, particularly in schools serving lower SES populations. However, scientific evidence establishing causal links and how mechanisms work between these variables is inconclusive.

The primary purpose of this paper is to methodically review the scientific literature applicable to the relationships between SES, climate in the school and classroom, and students' academic achievement. This review addresses whether climate can successfully disrupt the negative associations reported in earlier literature between SES and achievement among students of different SES backgrounds.

Chapter 1 serves as the foundation for this review. This chapter examines the aspects and variables included in the various definitions of school climate and classroom climate. Chapter 2 presents a systematic literature review of 81 peer reviewed articles conducted from 2000 to 2015 that tested links between SES, school climate and classroom climate, and academic achievement. Additionally, the chapter briefly reviews the central terms relevant to climate with respect to preschool, and presents key findings indicating correlations between climate and achievement for children of this age group. Chapter 3 examines intervention programs designed to improve school and classroom climate. Chapter 4 addresses the Israeli context, providing current data, studies conducted on this topic, and presenting possible avenues for future development of knowledge and research in Israel.

The search for articles to review was conducted using the science/web of knowledge search engine. The search was restricted to articles that underwent peer review and were published in the past 15 years (2000-2015). The decision to focus on this period is based on the increasing interest in school climate characteristics, schools' added value (Ladd & Walsh, 2002; Schagen & Hutchison, 2003), and in school effectiveness (Teddlie & Reynolds, 2000) evident during these years.

Keywords used for the search were "school climate," "classroom climate," or "classroom emotional climate" and "academic achievement," "academic," or "test scores." This search generated 283 results, of which 31 were selected as relevant.

Some studies focus on variables that we identify as central components of climate, but do not explicitly reference the term "climate". As such we conducted an additional search to pinpoint

research that measured correlations between central climate dimensions and academic performance, as specified in the following:

- **Student-teacher relationships:** Generated 147 results, of which 12 were selected as relevant.
- **School safety:** Generated 25 results, of which 7 were selected as relevant.
- **School/classroom engagement/connectedness:** Generated 532 results, of which 31 were selected as relevant.

## **Main findings**

### ***Chapter 1: Definitions of school and classroom climate and their measurements***

- There are significant differences in the definitions and measurements used by researchers in the study of school and classroom climate. These differences reflect the confusion and uncertainty regarding what “climate” entails, and the tangible need to facilitate definition and measurement that may be used extensively to better support school improvement efforts.
- More recent definitions of climate are broader than earlier definitions. Although having the advantage of greater inclusiveness, recent definitions tend to be overly exhaustive. This tendency reflects the need to agree on a climate definition that covers only those central areas that may be observed, quantified and measured to be used extensively.
- We identify most central components that recur in the majority of definitions. These are: student-teacher relationships, sense of school safety, and school/classroom engagement/connectedness.
- The dimension of a supportive, caring approach from teachers is a core central component of climate, and therefore should be included in future research and practice definitions and measurements of “climate.”

### ***Chapter 2: Climate as an intervening variable between SES and achievement***

#### **The relationship between SES background and academic achievement (achievement gaps and inequality)**

- There are significant differences in the ways in which SES is defined and measured.
- Higher socioeconomic or personal backgrounds correlate with higher grades.
- Findings with regard to the reduction (or increase) of achievement gaps between students from more affluent and those from disadvantaged backgrounds at different grade levels are inconsistent.

#### **The relationship between SES background and school climate**

- Findings regarding the relationship between SES background and the school climate quality are inconsistent, with some research demonstrating a significant correlation between lower

SES background and less positive school climate, while other research indicates a non-significant relationship between SES background and school climate.

### **School climate as an intervening variable in the relationship between SES background and academic achievements**

- The vast majority of studies are correlational. They indicate significant correlations between positive climate and higher academic achievement. However, they do not provide a basis for deducing a directional influence and causal relations between climate and achievement.
- The classroom context is the most significant setting related to academic achievement, suggesting that the majority of climate improvement efforts should be invested in the classroom context. Additional research is needed to establish a multifaceted body of knowledge regarding the multi-level climate dimensions related to academic achievement.
- The vast majority of the studies were based solely on student reports of climate. Future research should explore the entire school community's perceptions of school climate to allow more successful implementation of school reform programs that develop holistically with the school community.
- The scarcity of studies examining the impact of classroom-level variables on academic achievement, and the paucity of studies measuring variables of more than two measurement levels, suggest that additional research is needed to establish a multifaceted body of knowledge regarding the multi-level climate dimensions related to academic achievement.
- A few studies using a quasi-experimental design indicate that positive climate improves academic outcomes. Further experimental research should be conducted to establish the nature of the impact positive climate has on academic achievement.
- The majority of studies report that positive climate has a positive compensatory contribution to academic achievement, providing added value to achievement beyond the impact of SES. These compensatory relationships stress the importance of investing resources to promote a positive school climate in all schools, but especially in those serving communities living in poverty, as it could improve students' proficiency.
- Climate has a moderating effect on the link between SES and academic achievement, meaning that classrooms and schools characterized by positive climates successfully "level the playing field" for students of lower SES. This has the potential to reduce achievement gaps between students and schools of different SES levels.

### **Classroom climate in preschool**

- The term quality is used to describe classroom-level variables that ostensibly impact development of preschool-age children. Quality is comprised of two central dimensions that may be equated to social climate and pedagogical climate: emotional support and educational support, respectively.

- The pedagogical components of classroom quality are not associated with children's academic outcomes. Conversely, teachers' ability to establish emotionally-supportive **interactions** within a well-organized classroom has great impact on future academic outcomes.

### ***Chapter 3: Interventions that improve school climate, and their potential impact on academic achievement***

- No documentation of intervention programs of high scientific standards aimed at addressing “school climate” were found. Despite this, there are many other interventions associated with the school climate literature, or aimed at improving an aspect of climate. These interventions are associated mainly with social-emotional learning or character education.
- There is a tangible need to develop intervention guidelines based on accurate monitoring and assessment processes, and to document and evaluate efforts to change school climate.
- Positive school climate increases the likelihood of success of other intervention programs not currently associated with the school climate literature such as youth leadership and engagement or social and emotional learning.
- Locally developed programs that are designed to specifically address school needs and that are executed by the school community demonstrate better outcomes. We therefore recommend a strategy whereby school communities design their own programs, tailor-made to their requirements and social-organizational characteristics.

### ***Chapter 4: The Israeli context***

- Databases gathered in Israel provide fertile ground to study the influences and correlations between SES, school climate and academic achievements of students.
- Databases systematically gathered in Israel: the Growth and Efficiency Measures of Schools (GEMS or, in Hebrew, *Meitzav*) tests are given each year to a nationally representative sample of school principals, teachers and students. These monitor academic achievements in four core subjects. The tests also include numerous variables measuring perceptions of school climate. Additionally, the Social Deprivation Index (SDI), computed by the Ministry of Education indicates SES of students' families, from which school parameters are derived.
- It is recommended that additional research be conducted to promote specific knowledge in the field, establishing a knowledge base that will facilitate school climate and academic outcomes improvement. There is particular need to conduct studies that would allow examination of causal influences between SES, school climate and achievement.
- The systematic data collection in Israel establishes the foundation for designing policy and interventions to improve school climate.
- The Psychological and Counseling Services Division (PCS or, in Hebrew, *SHEFI*) offers numerous intervention programs for improving certain aspects of school climate, the most

prominent and extensive being the national program for promoting optimal school climate and violence reduction (in Hebrew, *ACHAM*). It would be both interesting and worthwhile to provide empirical support for this program, and anchor it in an evaluation study that will assess how implementation of the program relates to academic achievement of students in Israel.

### **Response: Hana Shadmi**

The Psychological Counseling Service (PCS) is at the crossroads regarding the relationship between socioeconomic status, climate and achievement. Within the context of the research, the variables that are of interest to us, as policy-makers, are those which we can influence.

The program the PCS operates in the present context began in 1998. Its goals are promoting a safe and protected climate in schools, promoting close relationships between teachers and students, mutual responsibility between students, treating children identified as in need within the system, and working towards change both with individuals (students and teachers) and on a system/school level. The program includes a knowledge gathering component from research worldwide, from experience accumulated through implementations, from successful programs, and from policy research. In this context, we must thank Professor Benbenishty and Professor Astor (participants in the learning activity about which this report was produced) who, together with Dr. Hagit Glickman, accompany our work from both the academic perspective and in collecting data.

From our perspective, school climate includes those things that either facilitate or obstruct learning. As part of our plan of work, we created seven standards or indicators of school climate. These indicators are the variables towards which we orient our work and they are also the ones measured by RAMA (Hebrew acronym for: National Authority for Measurement and Evaluation in Education) in the *Meitzav* test (Hebrew acronym for: GEMS – Growth and Effectiveness Measures for Schools): 1) security and safety, rules, procedures; 2) interpersonal communication and the feeling of connection to others in the school; 3) socio-emotional learning; 4) a climate of learning; 5) a separate solution for students with special needs; 6) community-orientation and interaction between the school and parents; 7) the physical environment.

This is the place to mention a number of things we learned from implementing the program: first, dealing with climate cannot be limited to the head teacher alone but must be the province of all the teachers and, second, this is work that must be done from within the school, not by an outside party. In our program, a professional from our office comes to the school to help them establish a lead team that includes the principal and other school officials. Third, working with data – schools work on the basis of data collected through a questionnaire developed for the program. In addition, we work with focus groups and with GEMS surveys in order to formulate a work plan and to create organizational structures together with all the participants. One last point: we have learned that the first group with whom we must work is the teaching staff and this does not refer only to the program's lead team but, first and foremost, to the fact that the program must enable

the team experience to be one of wellbeing and caring, that is, so that it too experiences a positive climate.

Results: Looking back with the perspective of many years, consistent improvement in climate indices can be seen. Although in recent years results on certain indices have stabilized, there is an increase in others. Thus, for example, we see an increase in schools' efforts to encourage social and civic involvement, a rise in parental involvement in school activities and an increase in students' perception of school as a life tool. In Arabic-speaking schools, we also see an increase in student reports of appropriate behavior in the classroom and a decline in student reports regarding different aspects of violence.<sup>12</sup> We also see (in both language sectors) a rise in teachers' reporting of individual meetings with students in primary school and middle school. A rise was also recorded in such dedicated hours built into the teachers' schedule, mainly in middle school. In contrast, there are less positive phenomena and in Hebrew-speaking schools, report of a decline in teachers' openness and the possibility of talking to them about personal issues.

Finally, because our topic is inequality, it is important to mention the *Marom* program which began operation this year and offers a **bundle** of support and guidance to schools with a high social deprivation index in order to assist them in optimally using the hours of learning to the fullest extent to improve their achievements and the educational climate, and to help the school thrive. The program includes long-term, consistent strategy (three to five years) focused on school climate and on teaching, learning and assessment processes. It also includes enlisting cooperation of parents and entities in the community to support promotion of education and of students.

<sup>12</sup> Specifically, in the report of groups of students who annoy other students (examined over time only in primary and middle schools), involvement in violent events, verbal violence, teachers' verbal hostility toward students, and teachers' lack of sense of security.

## **Trends in Investing Resources in Education by Socio-economic Standing: Public Investment (Local and National Government), Third-Sector Investment and Household Investment**

*Nachum Blass*

This literature review aims to present the reader with a short summary of the latest research knowledge on the allocation of education system resources among the various population groups. In the framework of this review, which have chosen our sources according to two main considerations: 1) the existence of research or other information we discovered; 2) the importance of the cell (quantitatively, qualitatively, socially or otherwise)<sup>13</sup>. In addition to studies and reviews published by researchers and in scientific journals, we use other sources, including:

- A. Publications by the Central Bureau of Statistics (the annual Statistical Abstract and specific publications on topics pertaining to those included in the review).
- B. Publications by the Ministry of Education, including directives from the director-general, and websites such as *Bamabat Rachav* [In Broad Perspective], *Shkifut Takzivit* [Budgetary Transparency] and other sites operated by the ministry's Economics and Budgeting Administration.
- C. Publications by the Knesset's Information and Research Center.
- D. Data from international databases such as EAG, TIMSS, PISA, etc.

Seeking to be as relevant as possible to the current state of the Israel education system, the review focuses on articles and studies published since 2005 (with the exception of central studies in the field that merit our attention). The review is also based on Internet searches use the following keywords (in Hebrew and in English): budget, budget methods, deprivation index, class size, teacher quality, socio-economic background data, construction, resource allocation, inequality, social gap, sector, type of supervision.<sup>14</sup>

The review focuses on four types of resources, which can all be expressed in monetary terms: budget allocations and hours of instruction, teaching personnel, classroom size, and buildings and equipment.<sup>15</sup>

<sup>13</sup> Of course, "importance" here is the importance attributed to the "cell" by the author of the review. Each reader may agree or disagree with the author's approach.

<sup>14</sup> For the purpose of preparing the review, I asked all of the Israeli researchers in this field to send me their work that has focused on resource allocation among pupils and schools from different socio-economic backgrounds. I was pleased to receive responses from most of the researchers, but unfortunately the "yield" of relevant work – that is, studies that explicitly address the disparities in allocation among the different population groups (rather than the connection between resources and achievements) – was meager.

<sup>15</sup> The review does not address other resources such as home resources, the social composition of the educational institutions, the ideological organizational framework, and so on. In this abstract, we will not discuss the variable of buildings and equipment because there is a consensus among the researchers that its impact on educational/learning outcomes (not on the well-being of the teachers and pupils) is negligible. We will just note that in the reality of Israel, most of the construction in recent years has been in sectors that previously suffered from prolonged discrimination. Therefore, the buildings are newer in the Arab, Bedouin and Druze sectors, and to some extent in the ultra-Orthodox sector. The improvement in the ultra-Orthodox sector is less tangible because they often receive buildings that were previously used by the state or state-religious education systems.

**The first part of the review** briefly summarizes the current knowledge, based on international and Israeli research that discusses the connection between these resources and academic/educational achievements, and the potential impact of these resources in narrowing disparities. In general, the community of researchers is quite united in its view of the following:

### **Budget**

There is generally a strong correlation between student background and educational and academic achievement. Therefore, differential allocation of resources is an essential condition – though not a sufficient one – for narrowing educational and learning gaps (2008 בלט, Hanushek et al., 2003; Agasisti et al., 2014; Loeb et al., 2007; Carter et al., 2013). Most developed countries have instituted various affirmative action programs, but ultimately more resources are available to students from wealthier strata than to students from weaker groups, and the various affirmative action programs are unable to erase the disparities in educational and academic outcomes.

### **Quality of teachers**

There is a consensus in the professional literature that teachers comprise the most important **school** resource, and have the greatest impact on learning and educational achievements (McKinsey 2007). Therefore, the question of how teachers are “divided” between schools that serve students from weaker socioeconomic backgrounds and schools that serve students from more affluent socioeconomic backgrounds is of utmost importance. The international data show that schools serving disadvantaged populations suffer more from a shortage of teachers than schools serving affluent populations, that the turnover is higher, and that teachers in poorer schools are less experienced and less educated. Nonetheless, there are indications in Israel that the characteristics of educators who teach students from disadvantaged populations are quite similar to those who teach students from affluent populations.

### **Class size**

Another variable that is widely discussed in the context of academic achievement is average class size, and there are different assessments of this variable’s influence. Nonetheless, most researchers agree that class size affects educational and academic achievements (especially in the lower grades), that its effect is ongoing, and that its impact is particularly strong for students from disadvantaged socioeconomic backgrounds (Angrist & Lavy, 1999; Bohrnstedt et al., 1999; Boneronning, 2003; Buckingham, 2003; Hattie, 2009; Ross et al., 1999).

**The second part of the review** is devoted to a very general description of the budgeting methods of education systems around the world and focuses on sketching the key features of budgeting methods in Israel and the development of the “social deprivation index (SDI),” used as a key instrument in formulating the affirmative action policy for over fifty years.

**The third part of the review** collects the research findings on the distribution of resources among various population groups during different stages of education. When possible, we distinguished between the different populations according to data on socioeconomic background, and in other places we noted the differences in allocation by sector and/or supervisory authority. When studies were not found and when possible, we used data published by the Ministry of Education and/or the Central Bureau of Statistics. So, how were the various resources divided?

## **Budget**

### ***Ministry of Education***

The Ministry of Education's resources are allotted primarily via funding for hours of instruction and teachers' salaries in preschools, primary schools and middle schools ("weekly hours" in primary education) and a budget allocation (mainly tuition in high schools, partial funding of the education budgets of local authorities, and various programs). Until recently, it was very difficult to obtain the data pertaining to the budgeting of hours of instruction and, in particular, the budget allocation. In 2015, for the first time, data was published on these subjects that was quite complete and will enable a much more in-depth study than previously possible.

**Preschools:** The overwhelming majority of children of ages 3 to 5 are enrolled in preschools that are almost universally funded according to budgeting formulas defined by the Ministry of Education. Since 2013, the allocation of resources in all of the preschools for ages 3 to 5 is via funding of teachers' salaries (directly to the teachers, who are state employees) and the transfer of budgets to the local authorities for teachers' aides (who are employed by the local authorities). Affirmative action is very limited. Until 2012, the method of funding kindergartens (age 5) was different than the method for funding nurseries (ages 3 to 4), though the calculation of the total budget was the same for both. Kindergartens were fully funded by the state and local authorities, while nurseries were funded through subsidized tuition. As noted, this situation changed in 2013. The subsidization of tuition, which was progressive, did not substantially change the work methods for nurseries and thus, it is difficult to regard it as affirmative action from an educational perspective. We are unaware of any research that examined the distribution of teaching resources among kindergartens according to different population groups (מושל, 2015).

**Primary schools and middle schools** – Like preschools, most primary schools and middle schools are funded through payment of teachers' salaries ("weekly hours") and a budget allocation – partial funding of employees of the local authorities (janitors, secretaries, etc.) and other programs. Various affirmative action programs have operated for many years in these two stages of education, funded through a variety of budgeting methods, based on different indices of social deprivation that we describe in the review. These methods and indices largely reflected social and political developments as well as the views on equality in the education system in Israel. Social and ideological perspectives, the geographic distribution and demographic/socioeconomic reality engendered a situation in which the state-religious education system consistently receives budgetary preference over the state education system, which in turn receives preference vis-à-vis the ultra-Orthodox independent education system and *Ma'ayan Hahinuch Hatorani*, the

recognized and unofficial ultra-Orthodox institutions and the exempt institutions (2010, קלינוב). This hierarchy of budget preferences is expressed in the number of hours of instruction allocated to these institutions (per student and per classroom) and in other budgets. The preference is generally greater in terms of allocation per student than per classroom. In recent years, the disparities in budgeting – particularly in regard to the Arab education system – have narrowed (2014, בלס).

Most of the research on budget disparities in education focus on these stages of education. There are three reasons for this. First, budget data is relatively available because there is considerable control and ownership of the activity in these institutions. Secondly, this is the primary arena for affirmative action programs. And thirdly, the social deprivation index is measured at these ages, which enables a comparison of budgeting in the context of data on socioeconomic background.

**High schools** – The budgeting of high schools is through tuition per student, which is set by calculating the cost involved in teaching the student – according to track of study, profile of the school’s teaching staff, classroom rank and level of service the school provides. Affirmative action in high schools is limited; when it does exist, it is directly implemented by allowing for smaller classrooms and indirectly, through frameworks that receive higher funding. This extra funding is ostensibly intended for weak and problematic students, but in fact, primarily serves students from low socioeconomic backgrounds (2010, קלינוב).

There is very little research on the distribution of resource allocation by the Ministry of Education in high schools. The reasons for this dearth of research include: standard tuition in the entire education system, lack of a deprivation index,<sup>16</sup> and the fact that affirmative action (if it exists) is implemented by directing pupils from disadvantaged socioeconomic backgrounds to “expensive” tracks of study.

### ***Local government budget***

Researchers disagree on the local government’s impact on inequality in resource allocation among the different population groups. On the one hand, some think that since the overwhelming majority of the budget comes from the national government, the local authority’s influence is negligible. On the other hand, others note that wealthy localities substantially widen the inequality and largely offset the central government’s efforts to narrow disparities. In any case, the central government’s influence (primarily in all of the stages of education up to high school) is usually in strengthening components beyond the teaching budgets (though in some cases it funds the splitting of classes in primary education). The local authority’s impact on high schools is quite limited due to the fact that most of the schools at this stage of education are operated by networks or public organizations.

### ***Households (parents)***

Households affect the distribution of spending for education in three ways: direct payments by parents to the educational institutions, spending on informal education (enrichment programs,

<sup>16</sup> The social deprivation index in high schools was formulated only in recent years.

private tutoring, etc.), and resources invested in the children's activities at home. All of the research conducted in these contexts – mostly based on surveys of household spending, questionnaires and surveys on sources of school budgets, or surveys conducted at the initiative of other groups – point to the unequivocal fact that affluent families allocate more resources to their children. The impact of these resources on educational and learning gaps is immeasurably greater than the impact of the affirmative action efforts of the Ministry of Education and local authorities, due to the scope of these resources and the direct link between family spending and the child who benefits from it.

### ***NGOs and other organizations***

Dozens, if not hundreds, of NGOs are active in the education system to promote objectives in line with their educational and social ideology. Many of these NGOs are working to boost education systems that advance populations from weak socioeconomic backgrounds, and these efforts help to reduce disparities. There are NGOs that engage in extensive activity, such as the Rashi Foundation, the Karev Foundation, and the Branco Weiss Institute. All of these NGOs report on their activity and some also conduct evaluation studies. In the past, the Ministry of Education made an effort to map these NGOs, but there is no comprehensive document on this subject, and we are not aware of any academic research that examines the impact of the various NGOs' activity and funding on the distribution of resources among the different population groups.

## **Quality of Teachers**

### ***Ministry of Education***

There is consensus in the education research literature on the question of which school factor makes the greatest impact on learning and educational results: teachers. Therefore, it is essential to identify whether there are differences in the "quality" of educational personnel according to the different population groups. However, this is difficult because there is no consensus on the definition of a "quality" teacher. Thus, most of the research on evaluating educational personnel references variables that do not always express actual quality, such as: the training of personnel as reflected in their education and years of teaching experience. Another aspect that reflects more or less the same variables is salary – that is, "better teachers are those who receive higher salaries." For our purposes, we wish to examine whether it is possible to substantiate the claim that personnel who serve more affluent populations are more expensive, and thus offset the budgetary advantage awarded to disadvantaged populations by adding hours of instruction. The Ministry of Education plays the key role in influencing the quality of educational personnel by establishing training methods, tracks of continuing education and salary. Its influence on the distribution of teachers among the schools is very limited, and is mainly exercised during the initial stages of education, when the teachers are state employees, and during the first years of their work as teachers, when they are placed by the Ministry of Education. Officially, the Ministry of Education's affirmative action policy operates only at the level of giving preference to teachers working in distant locales (בלס ורומנוב, 2010).

The scant research on the distribution of teachers among the different population groups indicates that, unlike the situation commonplace around the world, there is little difference in the “quality” of teachers deployed throughout the education system, as expressed in years of teaching and education (at least at the primary level). The lack of research in this field is surprising because most of the data is available at the Central Bureau of Statistics and in Ministry of Education files that researchers can receive upon request.

#### ***Other factors (local government, parents, NGOs)***

Most of the teachers in Israel work under national employment contracts and the transfer of teachers between schools is not imposed by the local government, parents or NGOs; rather, it is done voluntarily, according to their wishes and the forces of supply and demand. Thus, organizations outside of the Ministry of Education have little influence. And what influence they do have is expressed in two ways and in two contradictory directions in terms of the impact on academic-learning disparities: extra payments where there is a shortage of teachers, on the one hand, and hiring contract workers in places where there is a surplus of teachers, on the other (בלס, זוסמן וצור, 2015).

### **Class Size**

#### ***Ministry of Education***

As in the other topics, the Ministry of Education has the greatest influence on class size because it determines the size of the class for budgeting preschools (33 children in communities that do not receive a balancing grant and 31 in communities that receive a grant), the maximum class size in primary and middle schools (which today varies between 32 and 40, depending on the social deprivation index), and the size of the class for budgeting high schools. All these are subject to rules regarding the maximum walking distance to school for children. However, in addition to these rules, there are two other factors that affect the size of the classroom, in practice, in the various stages of education and in the different population groups. The first is the political-ideological factor – that is, the possibility of the state allowing different groups (state, state-religious, ultra-Orthodox, etc.) to operate separate education systems, and the demographic reality (numbers of children and their geographic distribution).

Most of the education research – and not much has been conducted in Israel – has focused on the connection between class size and student achievements, and not on the connection between class size and the educational institutions’ data on socioeconomic background. The latest Ministry of Education report on class size (Simchon, 2015) also did not include data that could shed light on this connection.

#### ***Other factors (local government, parents, NGOs)***

Similar to the situation vis-à-vis the quality of teachers, the local authorities, parents and NGOs do not have much influence on class size. The little influence they exert is expressed in relatively

few schools, one of which had funded the splitting of classrooms at a lower threshold than defined by the Ministry of Education. This issue recently came to the fore in the “sardine protest.”

## **Summary**

As noted above, the distribution of resources among different population groups is not a focus of research in the education community in Israel, and relatively few researchers study this subject. This is strange considering the importance of the subject, and we can only guess the reasons for this. Perhaps educators do not attribute great importance to economic resources and the way they are allocated, and economists do not see great importance in studying the economic mechanism that operates within the education system. However, the main reason, in our view is that the subject of equality and reducing gaps is no longer considered important, despite a multitude of declarations. It is very important to revive the discussion on all questions of resource allocation among the various population groups.

Fortunately, this is possible in terms of the data now available to researchers – data available to the public at the Ministry of Education, as well as data at the Central Bureau of Statistics and elsewhere. We still lack good data on spending by the local authorities, households and the various NGOs that can be directly linked to the schools and aligned with data on their socioeconomic background.

## **Response: Noa Heymann**

Looking at the Ministry of Education’s budgeting data, we can see that the main problem of differential budgeting in Israel stems from under-budgeting for the Arab education system. Without going into the reason for this disparity, a desire to help the disadvantaged can be seen, however, the system is not succeeding in helping a large stratum of the disadvantaged – Israeli Arabs. This state of affairs is similar in most budgeting channels in Israel. Tomorrow, the government intends to authorize the decision whose objective is to begin repairing these disparities.<sup>17</sup> Regarding the Jewish population, budgeting in actuality is progressive. One comment regarding the data that form the basis of the review presented: They are correct as of 2014, the period preceding the differential budgeting program based on the model currently in operation. In the framework of this model, we provide each classroom with a minimum budget and from what remains, we allocate differential budgets based on socioeconomic status. The change in budgeting begins with primary and middle schools because based on past experience, we have more information and more knowledge about what must be done. The state’s influence over the entire budget is, in practice, greater in primary and middle schools than in high schools.

The main objective guiding the new budgeting model was the ability to get to the “finish line” – to succeed in creating a model that could be implemented, from both the political and public perspectives. The reform led by the Shoshani Commission was excellent from the standpoint of its progressive principles but at the end of the day, their reforms were not realized. There is a

<sup>17</sup> The decision was indeed passed the day following the symposium, December 30, 2015.

tendency among researchers and planners to create precise theoretical models; ignoring reality and constraints, however, will lead to the model not reaching implementation and certainly not full implementation. This is particularly the case in the Israeli political reality in which ministers of education change very frequently and it is not certain that the next minister will support the policy of the former minister. In our model, to an extent, we sacrificed “on paper” what was right in favor of what would be able to be implemented.

In developing a budgeting model we examined a number of parameters: for each parameter, we asked ourselves what is the probability of implementing a budget for that parameter? Does it contribute to progressive differentiability? Can it be implemented over time and is it simple and effective? The significance of this process is that there is a need to also take existing circumstances into account as well as other considerations of the Israeli public. To illustrate, let us take the example of a small school in a locality in the periphery but which has an affluent population. According to Shoshani’s model, such a school would not receive a sufficient enough budget to allow it to remain open. Taking this into consideration, the system faced two options: cause the school to close down and risk public ire (something that can thwart the entire reform, especially if ministers change), or creating a unique solution for that specific school (a safety net). Not only would wide use of such “safety nets” make budgeting principles complicated and complex to understand and apply, but would also cause complications for us in needing to explain and justify why, at the end of the day, a certain locality receives budgeting allocated in a different way from others.

Regarding the statement that local authorities apply differential budgeting in their regions, it turns out that such budgeting allocation is insufficient, as carried out by local authorities. There are homogeneous authorities (in which there is no reason to budget differentially) and there are authorities that are heterogeneous but are not differentially budgeted. There are large (and growing) income disparities between strong and weak local authorities in Israel and in addition, weak authorities have large expenditures for welfare budgets and this makes it difficult for them to invest in education.

It is important to say that talking about inputs for education is not enough, it is also important to talk about what is done with the money. The education budget in Israel has doubled within the last decade and the education budget per student has risen significantly (among the highest increases in the OECD), and this despite the high rate of growth in the number of students in Israel (as compared to the OECD). The above notwithstanding, we have not witnessed a change in Israel’s position on the comparative PISA tests. As such, we must not neglect the discussion about outcomes and focus the discussion on inputs even though it is easier and the data are more available.

Policymakers are faced with a number of questions which I will mention. In my opinion, it is important to emphasize that these questions have no clear and consensual answer. Should affluent parents be permitted to use their own funds to compensate for progressive budgeting? Given limited resources, do we focus only on progressive steps, or do we also invest in promoting universal education?

## **Seminar Participant Comments**

### ***Directions for future research:***

- When discussing early childhood, and the developmental gaps between socioeconomic strata in this group, one should address the growing body of literature focusing on brain development at these ages. This is particularly relevant to research that deals in poverty and deprivation in these ages, and their impact on brain development.
- When examining trends of segregation vs. integration in Israel, primarily in reference to Arab society, one should address internal migration of Arabs, and particularly their move from wholly Arab cities to mixed cities. Many continue to attend the Arab education system (such as those moving to Nazareth Illit who continue schooling in Nazareth), and so may prove an even more interesting topic of study.
- The impact of new technologies on classroom and school climate has yet to be examined, as well as the link between such climates and academic achievement. Learning and communication technologies may alter the learning process in general, and the class climate and function of individuals within it specifically.
- If the study aims to guide education policies, one should examine where invested resources would generate the most benefit. Future study could examine the efficacy of investing funding in classroom climate, as compared to investing in other avenues (such as smaller classes, or higher teacher salaries). One should note that such research would necessitate a different research design than the one currently available to us.

### ***Conditions Unique to Israel:***

- The Israeli labor market, and even more so the local education system, is increasingly comprised of populations with specific characteristics: Haredis and Arabs.

There are cultural differences between the Arab and Jewish populations that impact, among other things, incorporation into the work force, particularly relevant among Arab women. This is in addition to the gap in allocation of resources by the State to the Arab population. There is also a language gap between the Arab sector and Jewish majority.

The Haredi sector is characterized by a culture that encourages study of holy scriptures at the expense of subjects that promote incorporation into the labor market and higher education.

- Insufficient information exists regarding the new policy of opening registration zones by the Education Ministry. While the Ministry has launched this policy with an initial assessment study, data is still unavailable.
- There is insufficient data regarding the impact of recent policy changes of parent payments on segregation between schools and their budgeting. The new policy entails much higher payments from parents than ever before. It is necessary to begin gathering data on this issue, so that its future impact may be assessed.

***Additional information:***

- In addition to the (socioeconomic) segregation between various areas of residence and schools, the last five years have also revealed a trend of segregation between classes within secondary and postsecondary schools. Schools draw in stronger populations by opening unique study tracks and accelerated classes, effectively increasing segregation between students of various socioeconomic strata.
- Classroom climate, which has been indicated as impacting student achievements in class, is not measured using Meitzav tests, and is not included in the data published by RAMA (National Authority of Measurement and Evaluation). It is measured in the school questionnaires of SHEFI (Education Ministry's Psychological and Counseling Services Department), but these are only for internal use within schools or specific education systems.

## **Parliamentary viewpoint on inequality and education: Seminar Debate Summary**

Dr. Shirley Avrahami, director of RIC (the Knesset's Research and Information Center), opened the session by remarking on the importance of collaboration between the RIC and Knesset, and the Israel Academy of Sciences and Humanities, and the thanks owed to all those who had participated in this venture. She was followed by Mr. Yuval Vurgan, education team leader at RIC, who commented that this collaboration between the Knesset and the Academy's Initiative for Applied Education Research was made possible by a Knesset amendment to the National Academy of Sciences Law in 2010, whereby a clause was included allowing government ministries (and in this case the Knesset) to accept consultation from the Academy regarding matters that require research-based knowledge. The RIC is happy to cooperate with the Academy, and the Initiative, and learn from it.

The three primary avenues through which the Knesset may impact Israeli public agenda are legislation, overseeing the government, and representation of the public by raising issues in the public agenda. Over the years, the Knesset has pursued all three avenues to promote equal opportunities in education. In legislation, the Knesset passed the 1988 Special Education Law, establishing the eligibility of all special-needs children to special education, and in 2000 the "integration amendment" of this law came into effect – integrating such children in the "regular" education system. In 1999 another law was re-legislated (as it was previously legislated in 1984 yet never implemented) – the Compulsory Education Law – exempting parents from the need to pay tuition for children aged 3-4, and in 2000 the Students Rights Law was passed, forbidding discrimination between students also on the basis of socioeconomic background. That same year, another law was passed regarding textbook borrowing (implemented only in 2010). In 2005, a school food project was launched thanks to the School Meals Law. There is, of course, additional legislation, but these serve as excellent examples.

Within its responsibilities to oversee the government, the Knesset promotes differential budgeting, increasing supervision of parent payments, the establishment and operation of after-school day cares, reduction of drop-out rate, advancement of early childhood education, and discrimination prevention. There have been several discussions on each of these issues by the Knesset Education Committee. In its efforts to raise public awareness, the Knesset has made significant strides for, among others, the lobby for early childhood education, and the promotion of education in Arab society – actions that have been continued in the current Knesset. The presence of Knesset members in this seminar testify to the great thirst for knowledge within the Knesset to extend their understanding of these matters for the furtherance of their duties.

**Dr. Shirley Avrahami** raised the following question for debate, and asked Knesset members to address it: what is your view of equal opportunity in Israeli education, and how would you prioritize it (in relation to the four primary topics of this seminar)?

**KM Margi:** The short answer is that there is no equality in Israel's education, and that this issue is not discussed enough in public agenda. One should clarify: this inequality has no sinister cause, but is created by the method of the State's budgeting and implementation of the education laws in Israel.

There are "objective" reasons why the government has struggled to create education equality in Israel. First, there are differences among students living in various areas of the country, with stronger municipalities investing more in education, and weaker ones unable to find the necessary resources. There are also differences among municipalities in education infrastructure – in classrooms, schools, museums, and so forth. Second – parents supply private funding, with more affluent parents obviously able to make bigger payments. One example of this problem is evident in the parents' payments to schools. Schools succeed in bypassing the restrictions placed on parent payments, and the supervision of this is lacking. Additionally, municipalities dispute the Education Ministry's stance on differential budgeting. However, the government also has a role to play here. We must proceed with care, without damaging the stronger populations, but a restructuring of budgets, particularly changes to narrow the gaps between funding of various education streams, may increase equality in education. Looking at it on the international scale, it is important to note that countries with greater education gaps are less successful in international testing.

**KM Prof. Trajtenberg:** Generally, the education system is not sufficiently geared towards reducing gaps and maximizing the individual potential of each student. In early childhood education, perhaps the most significant period impacting a person's future, the system is particularly inequitable. Another problem stems from the fact that there is no unified government entity responsible for this age group. While one department focuses on the 0-3 age range, another is responsible for 3-12, and yet another for university students, while no single entity oversees professional training for those without college or university degrees who would still pursue this vocation.

Regarding the measure to which this subject is ranked in public debate, it is clear it has yet to be addressed as a first, or even second, priority. One must understand there exists great competition for the measure of attention given by the Knesset to various topics, and it is difficult, even for Knesset members, to enlist other legislators to promote particular matters. In this sense, the Knesset may serve to amplify discussions held by the public, or in the media.

**KM Dr. Jabareen:** Let me begin by saying that the work of the Knesset's RIC is enormously important, as is the incorporation of data and scientific study in decision making generally. I would mention the report I requested from the RIC regarding the budgeting for Arab schools, the first of its kind to be commissioned by the State, and not by interest-oriented or political factors.

I would like to emphasize certain aspects of education inequality that have yet to receive satisfactory attention. Thus far, discussion has centered on material equality: quotas, hours, or infrastructure. The impressive plan for differential budgeting has been mentioned, which is in itself incredibly significant. Nevertheless, there are three additional points that should be raised:

1. Curriculum: Even should Arab students receive similar budgeting to that of Jewish students, one cannot expect them to experience the same climate or achievements of Jews if they feel alienated from the study topics, narratives, culture, and inherent cultural icons. For example, there is one Arab poet from Israel whose poetry is prohibited from the curriculum. Although there is a school named for Tawfiq Ziad, children are not allowed to be taught who he was. This alienation is significant, and has pervasive impact on student performance.
2. System structure and ability of Arab educators to impact its management: The religious education system has the Religious Education Council, and Haredi education has almost complete autonomy over its management. But the Arab education system has no professional body representing it, not in the Ministry, and not in the districts (including districts with an Arab majority). We feel we have no true ability to play a role in making significant decisions with the Education Ministry. One last example: the argument regarding the last civics studies textbook. Arab representatives in that class committee made their remarks, but aside from several technical suggestions, their remarks were rejected.
3. No integrated education streams: The education system does not provide integrated education that would include both Arabs and Jews. Every student should have the right to attend a mixed school that would offer integration in all aspects of education: curriculum, language, and school management.

**Dr. Avrahami then raised the following question for debate:** in view of the issues you've raised in your first answers, what can be done to promote education equality generally, and what specifically can the Knesset do?

**KM Margi:** One problem lies in the fact that, as legislators, we come here and complain about the situation. As the legislative body, the change is ostensibly our responsibility. But sadly not all desires can be attained. Ideally, and this point is also supported by a conversation I held with educators and education department heads, we need a real revolution in Israeli education. The current system is the same we've had for forty years or more: the same methods, same management culture, and the same results. There is no minister truly investing the resources for a pilot program to launch a new education system. A system of such a large scale is difficult to change, with the constraints, scope, parent and teacher associations. There are currently many reforms that preserve the general system structure, merely providing "patchwork" solutions.

But it is also important to note the efforts that are being made. If we leave every meeting of the education committee with reports and follow-ups of performance – that is action. An example of this can be seen in the reform for a second kindergarten teaching assistant. However, one must understand we are not the executive body.

**KM Prof. Trajtenberg:** I will describe what I have attempted to do within my responsibilities in the Knesset: the establishment of an authority for early childhood in the Education Ministry with the scope of obligations and jurisdiction to concentrate all issues regarding the care of children aged 0-6. There are currently 5-6 such bodies entrusted with early childhood: the Ministry of

Education supervises kindergartens, Welfare is responsible for the National Program for Children and Youth at Risk, the Health Ministry takes care of TIPAT HALAV (juvenile development), and the Economy Ministry is responsible for existing daycare. Additionally, there are those “void” areas that no ministry is responsible for. As I’ve stated, the greatest gaps exist between more and less affluent parents of this age group. A parent that chooses to send their child to daycare pays 30,000-40,000 shekels a year.

Next week, the Ministerial Committee for Legislation will review our proposal to establish an authority for early childhood. We have been in constant contact with all the relevant factors. This is a window of opportunity to promote handing responsibilities for early childhood to the Education Ministry, and there is currently an inter-ministerial committee in the PMs Office to examine this option. It is very important to make every effort to ensure the Ministry is given the mandate over daycare, and to promote the establishment of an authority for early childhood.

**KM Dr. Jabareen:** As an Arab Knesset member, I am not only in the opposition, but even at the very end of opposition benches. This restricts my abilities greatly, and leaves me few parliamentary means at my disposal: there is a tiny probability of gaining a majority vote in the plenum. However, certain things can still be achieved, mainly through participation in Knesset committee deliberations. I chose to be a KM in the Knesset’s education committee for two reasons: first, this is (usually) a less controversial political issue, and second because I saw in KM Margi, the committee chair, a partner in promoting educational social issues. The committee’s work is primarily focused on supervising government actions and making recommendations that may be disregarded. This is particularly important when the government chooses to act, when it initiates. One example of an area that we do succeed in influencing is the differential budgeting, where I have taken upon myself to ensure it does indeed get passed. I do this by submitting questions, participating in debates, and holding conversations.

We are less capable of impact on creating anything new. For example, I mentioned the lack of differential budgeting in postsecondary education. It’s not at all clear that any way exists to truly promote such budgeting (although this does not mean we won’t try). The situation is further complicated when addressing matters of substance, such as the curriculum I mentioned earlier. However, we have established a lobby for Arab education, commissioned reports from RIC, and things of that nature. In certain concrete matters, such as quotas or budgeting, we can make progress, but in other matters it would be difficult to affect change.

The constraints of parliamentary tools have encouraged me to develop extra-parliamentary ones, the first being community empowerment. This entails working with communities to raise awareness of education, and strengthen their position when facing the Education Ministry. Another tool lies in working more closely with international factors, both in Israel and abroad.

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## Appendix I: Equality of Opportunity in Education, Mobility and Social Gaps: An Introduction<sup>18</sup>

*Moshe Justman*

The current activity of the Initiative for Applied Education Research on education and social gaps described in this report, was triggered by a book, *Whither Opportunity*, a collection of empirical studies by leading scholars on education, inequality, and economic opportunity edited by Greg Duncan and Richard Murnane. *Whither Opportunity* showed that the United States is not the “land of opportunity” it once was—a country that enabled people from all strata of society to take advantage of economic and social opportunities, made possible by a system of public education that was open, inclusive and classless, where anyone prepared to make the effort could reach their full potential. Of course, there is a large dose of hyperbole in this description; racial and social segregation have always been present in American schools. Yet it faithfully conveys a broad commitment, in American education policy, to promoting socioeconomic mobility, especially for those who began life at a disadvantage due to circumstances beyond their control: parental education or income, religious, ethnic or national background, geographic location, gender, or a combination thereof.

The important insights that *Whither Opportunity* offers have provided new focus to the ongoing discussion on policies for promoting social mobility through education. The basic insight (about which Professor Yaari also spoke) is the emphasis placed on *opportunities* as the objective of these policies, that is, on the dynamic impact that the current education system has on life outcomes in the future, rather than on the link between education and economic growth or inequality. This seems an empirically sound approach. While the link between education and opportunity is clearly identified, the same cannot be said of the link between education and economic growth or inequality. Such relationships undoubtedly exist in principle, but are almost impossible to pinpoint or estimate with any reliability. They unfold over decades, with a wide range of confounding variables intervening in the meantime, and cannot be isolated with anything approaching currently accepted standards of identification. There is a circumstantial relationship between education and economic growth and between education and economic equality, but it is not identified to the point that we can say whether increasing the average number of years of schooling in the population by another year would actually increase future growth.

Another central point offered by *Whither Opportunity* is its emphasis on the impact of economic deprivation on education outcomes—on the possibility of taking advantage of what the education system has to offer. They make a strong case for the argument that in the interaction between education and inequality, this is the main direction of effect. Its most direct channel, well-established in the literature, is the effect of the home environment on academic success. Educated and affluent parents contribute to their children’s success in many and diverse ways: exposure to

<sup>18</sup> This Appendix is a summary of Prof. Justman’s presentation at the seminar held by the expert team in June, 2015. All view expressed in this section those of Prop. Justman, and the responsibility for the content lies with him.

a richer vocabulary, help with homework, better physical conditions, providing a role model, and a greater ability to take advantage of what public education has to offer.

The second important point it makes is that any policy that seeks to promote educational opportunities must be combined with supplementary steps that address the sources of disadvantage outside the school. The policy effort to promote educational opportunities cannot be conditioned on the overall reduction of inequality in society; the degree of social inequality we have reflects our society's general preferences mediated through our system of government. It is, however, possible to deal with specific problems that make it difficult for socially disadvantaged students to take full advantage of the opportunities offered by the education system – such as poor nutrition, undiagnosed or untreated medical problems, illiterate parents, unstable conditions in the home, and so on. These are specific problems that can be effectively addressed without taking on the general problem of inequality in society.

Proposals in this vein were recently put forward in the report by the Subcommittee on Education and Poverty of the Alalouf Committee for the War on Poverty, chaired by Professor Audrey Addi-Raccah, of which I was a member. The subcommittee, which comprised academics, educators and welfare professionals, made proposals that take into account the impact of social deprivation on the ability of the student to take advantage of educational opportunities. The committee's proposals enjoyed broad public support because they were concrete and precisely targeted the specific problems they were asked to address, and did not take on the overarching problems of poverty and inequality.

For me, this offered a general lesson which pertains directly to our current discussion. The word "equality" figures prominently in the title of this seminar. But recent experience suggests that our discussion might be more effective if we moved away from the notion of "equality" as a goal, and took a more modest approach.<sup>19</sup> In the past year, I was indirectly involved in the Ministry of Education's attempt to promote differential allocation of the education budget based on socioeconomic criteria (an initiative of the previous education minister, Rabbi Shai Piron). This experience brought home to me the political obstacles that must be overcome to implement such policies. They have costs and benefits. The costs are clear: public resources funded by taxes disproportionately imposed on the more affluent members of society. If they are to gain support, the public benefits of these policies must also be clearly articulated. Unfortunately, the most scientifically accurate formulations are not always the most publicly persuasive.

Policies aimed to reduce inequality provide an illustration. Economists have universally embraced the Gini Index as their common measure of income inequality. It has many theoretical advantages, which are widely recognized in the academic community, but is of little or no use as a goal for public policy. It is, for all practical purposes, impossible to explain to the general public; it has no intuitive dimension, no unit of measure; and, it has no point of reference. As we do not aspire to absolute equality it is unclear what Gini Index value we should aim for, and it is impossible to

<sup>19</sup> I bear some responsibility for this emphasis on equality, as a member of the Initiative's initial steering committee. Perhaps we should have noticed that it does not appear at all in the titles of either of Duncan and Murnane's *Whither Opportunity* and *Restoring Opportunity*—not *Whither Equal Opportunity* or *Restoring Equal Opportunity*.

make a publicly coherent case for, say, raising the tax rate by 2% in order to reduce the Gini index from 0.38 to 0.36. The degree of desired inequality in society is a political issue and should be presented in a way that is amenable to public debate.

In contrast to the Gini Index, consider Thomas Piketty's highly influential book, *Capital in the Twenty-First Century*. Piketty measures inequality by the share of resources in the hands of the top one percent of society. This is information that everyone can relate to. One can have an opinion on whether the current share is too high, and consider proposals to lower it. One can ask, if Piketty had written his book using the Gini Index as a measure of inequality, would it have reached the same level of public exposure? It is important to conduct the public debate on inequality in terms ordinary people can relate to, such as the share of children living under the poverty line. One can have a reasoned discussion on whether reducing this share from 30% to 25% is a goal worth a uniform increase of 2% in the income tax, or not.

As a more direct application of this observation to our discussion of equality of opportunity, consider the theoretically established and widely used conceptual distinction between circumstances and effort (which Professor Yaari has already mentioned) as a basis for systematically operationalizing equality of opportunity, a highly influential formalization developed by John Roemer (1998). Examples of circumstances are parental education, being born an Arab, Jew, black, white, man, woman, and so on. According to Roemer's normative position, it is fitting that society should compensate for circumstances so that a person's outcomes (in wellbeing, employment, academic achievement) will be the result only of the amount of effort exerted. This approach motivated the construction of statistical measures that quantify the association between outcomes and circumstances, a weaker association indicating greater equality of opportunity.

In this spirit, the Ministry of Education sought to prevent affluent local authorities from investing their own funds in schools in order to reduce classroom crowding. The Ministry of Education disburses resources according to class size. Affluent local authorities would add their own resources in order to reduce crowding in the classroom. This has a negative effect on equality of opportunity, as the children in affluent communities learn under more favorable conditions than less well-off children, and the Ministry, taking a principled stand, sought to put a stop to this. The result was a public outcry and an appeal to the High Court on the one hand; and on the other hand, circumvention of the directive, e.g., by adding a teacher's aide to crowded classrooms. Agreeing with the principle of equal opportunity in education is one thing; forgoing an opportunity to give one's own child the best possible education one can is something else entirely.

This is not to say that we, as a society, are willing to accept a state of affairs in which disadvantaged children do not have a fair chance of advancing in life and realizing their true potential. But it does argue for a different approach, summarized in three main points.

First, it suggests shifting the emphasis from equality of opportunity as a fundamental principle to an emphasis on correcting specific constraints that prevent children from disadvantaged backgrounds from realizing the benefits of education, concrete goals for which public support comes naturally. For example, providing school meals for children in schools serving deprived

communities; diagnosing student disabilities and special needs upon entering the education system and at set intervals; addressing problems in the home that hamper student progress; ensuring that schools serving disadvantaged populations have suitably qualified teaching staff; and, so on. All these promote greater opportunity in education for the disadvantaged in a manner that is easy to understand and relate to, without emphasizing the adversarial element implicit in any effort at equalization.

Second, and related, is a shift in emphasis from the financial, budgetary dimension of education policy to content. There are two good reasons for this. One is that we know there is no clear relationship between money and education outcomes; rather, it is how the money is used that is important. Pumping large amounts of money into a school without it having a clear idea of what to do with the money may do more harm than good. There is clearly a need for an operational program, and it makes sense that it should take center stage, with the budgetary implications arising as incidental. The differential allocation of funds would be the consequence of operating the program; the programs themselves would be in the spotlight.

Third, it is essential to recognize the fact that even when the education system engages in affirmative action, children from affluent backgrounds will benefit from preferential treatment in education. This seems unavoidable, no matter what the system does. Therefore, for every child to have a fair chance, there must be improvement across the board, with special focus on the weakest points in the system, for the reason that at the end of the day, these weaknesses will disproportionately affect the most disadvantaged students. If there is a general shortage of qualified mathematics teachers, educational opportunity is better served by alleviating this general shortage than by unrealistically exhorting the system to direct its better teachers to serve more disadvantaged populations. Reducing variation between schools and raising the general quality of education differentially benefits those groups in society that are less adept at coping with the system's deficiencies. Affluent parents find a way to provide their children with a good education; parents without resources make do with the schooling the system provides.

## Appendix II: Agendas of the seminars and the Symposium

### Seminar agenda, December 10<sup>th</sup> 2013, Jerusalem

8:30-9:00	Coffee and pastries to welcome workshop participants
9:00-9:10	Welcome and opening remarks – <b>Prof. Menahem Yaari</b> , chairman of the steering committee of the Initiative for Applied Education Research
<b>First session: <i>Whither Opportunity?</i> – The research, the book and the data</b> <b>Chair: Prof. Michael J. Feuer</b> , George Washington University and president of the National Academy of Education, U.S.	
9:10-10:05	<i>Whither Opportunity?</i> Sources of data, collaboration in writing the book, and main findings <b>Prof. Richard J. Murnane</b> , Harvard University
10:05-10:55	How “ <i>Whither Opportunity?</i> ” developed: Overview of the work of Russell Sage and Spencer Foundations <b>Prof. Michael S. McPherson</b> , the Spencer Foundation
10:55-11:20	Discussion
11:20	break
<b>Second session: Trends in economic and social inequality in Israel – review and discussion</b> <b>Chair: Prof. Noah Lewin-Epstein</b> , head of the steering team	
11:35-11:50	Opening: The problem of inequality and the lack of class mobility <b>Prof. Noah Lewin-Epstein</b> , Tel Aviv University
11:50-12:20	Inequality and economics, in Israel and in general <b>Prof. Yossi Zeira</b> , Hebrew University of Jerusalem
12:20	Lunch
<b>Third session: Research on socioeconomic inequality and educational opportunity in Israel</b> <b>Chair: Prof. Yosef Shavit</b> , member of the steering team	
13:05-13:35	Review: Disparities between pupils from different socioeconomic backgrounds over the years <b>Dr. Hagit Glickman</b> , National Authority for Measurement & Assessment in Education (RAMA)
13:35-14:00	On inequality in education between the Jewish and Arab sectors <b>Dr. Ayman Agbaria</b> , University of Haifa

<b>14:00-14:25</b>	Allocation of resources for education in Israel: Public and private sources <b>Noam Zussman and Shay Tzur</b> , Bank of Israel – Research department
<b>14:25-14:50</b>	The impact of changes in recent decades on access to higher education <b>Dr. YarivFeniger</b> , Ben-Gurion University of the Negev
<b>14:50-15:20</b>	Discussion
<b>15:20</b>	Coffee break
<b>Fourth session: Socioeconomic inequality and class mobility in Israel: Existing and missing data</b> <b>Chair: Prof. Moshe Justman</b> , member of the team of experts	
<b>15:35-16:05</b>	Possibilities for analyzing the connection between socioeconomic inequality and educational achievements at the aggregative level and individual level <b>Dr. Dimitri Romanov</b> , Central Bureau of Statistics
<b>16:05-16:30</b>	On National Insurance Institute data and the ability to link data on the education system to data on poverty and welfare payments <b>Dr. Daniel Gottlieb</b> , National Insurance Institute
<b>16:30-16:45</b>	Challenges in differential budgeting in the Ministry of Education <b>Dudi Mizrahi</b> , Division director, Economics and Budgeting Administration, MOE
<b>16:45</b>	Discussion
<b>17:10-17:30</b>	Summary and thoughts about next steps <b>Prof. Michael J. Feuer</b> , George WashingtonUniversity, U.S

## Seminar agenda June 17<sup>th</sup>, 2015, Jerusalem

8:30–9:00	Registration
9:00–9:10	Greeting and Opening Remarks: <b>Prof. Menahem Yaari</b> , chair of the Initiative's Steering Committee
9:10–9:30	Equal Opportunities in Education, Mobility, and Social Gaps: An Introduction <b>Prof. Moshe Justman</b> , Ben Gurion University in the Negev
9:30–10:40	<b>First Session: Private and (National and Local) Government Investment in Education</b> <b>Chair: Dr. Analia Schlosser</b> , Steering team member
9:30–9:50	Trends in Investment of Resources in Education, by Socioeconomic Class: Public Investment, Third-Sector Investment, and Household Investment <b>Nachum Blass</b> , writer of the review
9:50–10:10	Respondents: <b>Prof. Ruth Klinov</b> , the Hebrew University of Jerusalem, and <b>Mr. David Mizrahi</b> , Ministry of Education
10:10–10:40	Open Discussion
10:40–10:55	Coffee break
10:55–12:05	<b>Second Session: Socioeconomic Status, School Climate, and Scholastic Achievements</b> <b>Chair: Prof. Rami Benbenishty</b> , Steering team member
10:55–11:15	Socioeconomic Aspects and Inequality, the School and Classroom Climate, and their Link with Scholastic Achievements <b>Dr. Ruth Berkowitz</b> , Member of the review writers' team
11:15–11:35	Respondents: <b>Prof. Yaacov Yablon</b> , Bar-Ilan University, and <b>Ms. Einav Luk</b> , Ministry of Education
11:35–12:05	Open Discussion
12:05–12:45	Lunch break (a light meal will be offered)
12:45–13:55	<b>Third Session: Early Childhood Education, Inequality and Social Gaps</b> <b>Chair: Prof. Esther Adi-Japha</b> , Steering team member
12:45–13:05	Early Childhood Education as a means to Reduce Inequality and Social Gaps: Research, Policy, and Practice <b>Dr. Smadar Moshel</b> , Member of the review writers' team

<b>13:05–13:25</b>	Respondents: <b>Prof. Miriam Rosenthal</b> , the Hebrew University of Jerusalem, and <b>Ms. Sima Hadad</b> , Ministry of Education
<b>13:25–13:55</b>	Open Discussion open to the floor
<b>13:55–14:10</b>	Coffee break
<b>14:10–15:30</b>	<b>Fourth Session: Residential Segregation and Integration and their Implications for Opportunity Disparities</b> <b>Chair: Prof. Noah Levin Epstein</b> , Chair of the steering team
<b>14:10–14:30</b>	Housing Segregation and Integration based on Pupils' Socioeconomic Status <b>Prof. Audrey Addi-Raccah</b> , Member of the review writers' team
<b>14:30–14:50</b>	Respondents: <b>Dr. Hanna Swaid</b> , The Arab center for alternative planning, and <b>Ms. Meirav Zarbiv</b> , Ministry of Education
<b>14:50–15:20</b>	Open Discussion
<b>15:20–15:30</b>	Concluding Remarks: <b>Prof. Noah Levin Epstein</b>

**George Washington University Seminar, September 10<sup>th</sup>, 2015,  
Washington DC**

8:00–8:30 am		Coffee/Light Breakfast Served
8:30–9:00 am	Feuer & Lewin-Epstein	Welcome (MJF) The Israeli context (NLE)
9:00–10:00 am	<i>Session 1</i> Session Chair: Murnane Discussant: Gamoran	Paper: <b>Trends in Residential Segregation/ Integration Based on Students’ Socioeconomic Status</b>  Presenter: Audrey Addi-Racah
10:15–11:15 am	<i>Session 2</i> Session Chair: Glazer Discussant: Malamud	Paper: <b>The Main Developments in the Allocation of Resources in Israel’s Formal Education System</b>  Presenter: Nachum Blass
11:30–12:30 pm	<i>Session 3</i> Session Chair: Frey Discussant: Tienda	Paper: <b>Daycare Policy for Ages Birth to Three in Israel: A Comparative Perspective</b>  Presenter: Smadar Moshel
12:30–12:45 pm	Break	Boxed lunches available in Room 401.
12:45–1:45 pm	<i>Working Lunch</i> Session Chair: Feuer Discussant: Hout	Paper: <b>Measurement and Determinants of Relative Mobility of Lifetime Earnings</b>  Presenter: Daniel Gottlieb
1:45–2:45 pm	<i>Session 4</i> Session Chair: Green Discussant: Espelage	Paper: <b>A Scientific Review of the Links Between Socioeconomic Background, Inequality, School Climate, and Academic Achievement</b>  Presenter: Ruth Berkowitz
3:00–4:00 pm	Murnane, McPherson	<b>Roundtable Discussion</b> Moderator: Michael Feuer
4:00–4:15 pm	Feuer & Lewin-Epstein	Closing Remarks

**Symposium agenda, December 29<sup>th</sup>, 2015, Jerusalem**

8:30-9:00	Assembly & registration
9:00-9:10	Greetings and opening remarks – <b>Professor Menahem Yaari</b> , Chair, Steering Committee, Initiative for Applied Education Research
9:10-9:40	Opening lecture: Inequality and Missed Opportunities in Education <b>Professor Noah Lewin-Epstein</b> , Chair, expert team; member of the Initiative Steering Committee
9:40-10:45	<b>First session: Early Childhood Education as a Means of Reducing Inequality and Social Gaps</b> <b>Chair: Dr. Esther Adi-Japha</b> , member of the Expert Team
9:40-10:05	Early Childhood Education as a Means of Reducing Inequality and Social Gaps: Research, Policy and Practice, <b>Dr. Smadar Moshel</b> , author, scientific literature review
10:05-10:20	Respondent: <b>Dr. Ayman Agbaria</b> , University of Haifa
10:20-10:45	Open discussion with audience participation
10:45-11:00	Break
11:00-12:05	<b>Second session: Trends in Residential Segregation or Integration and Their Implications for the Opportunities Gap</b> <b>Chair: Professor Noah Lewin-Epstein</b> , Chair, Expert Team
11:00-11:25	Trends in Residential Segregation or Integration as a Function of Students' Socioeconomic Status, <b>Professor Audrey Addi-Raccah</b> , co-author, scientific literature review team
11:25-11:40	Respondent: <b>Dr. Maya Choshen</b> , Jerusalem Institute for Israel Studies
11:40-12:05	Open discussion with audience participation
12:05-13:10	<b>Third session: Socioeconomic Status, School Climate and Academic Achievement</b> <b>Chair: Professor Rami Benbenishty</b> , member, Expert Team
12:05-12:30	Relationships between Socioeconomic Features and Inequality, and School and Classroom Climate, and their Connection to Academic Achievement, <b>Dr. Ruth Berkowitz</b> , co-author, scientific literature review team
12:30-12:45	Respondent: <b>Ms. Hana Shadmi</b> , head, Psychological Counseling Service, Ministry of Education
12:45-13:10	Open discussion with audience participation

13:10-13:55	Break
13:55-15:00	<b>Fourth session: Private, Governmental and Local Investment in Education</b> <b>Chair: Prof. Yossi Shavit</b> , member, Expert Team
13:55-14:20	Trends in Resource Investment in Education as a Function of Socioeconomic Status: Public Investment, Third Sector Investment , and Investment by Household, <b>Mr. Nachum Blass</b> , scientific literature review author
14:20-14:35	Respondent: <b>Ms. Noa Heymann</b> , manager, Education Sector, Budget Division, Ministry of Finance
14:35-15:00	Open discussion with audience participation
15:00-16:00	<b>Fifth session: The Parliamentary Perspective</b> <b>Chair: Dr. Shirley Avrami</b> , Director, Knesset Research and Information Center
15:00-16:00	Panel discussion – The Parliamentary Perspective, with the participation of: <b>MK Yaakov Margi</b> (Chair, Education Committee, Shas), <b>MK Dr. Yousef Jabareen</b> (United Arab List), <b>MK Prof. Manuel Trajtenberg</b> (Zionist Union)
16:00-16:15	<b>Closing remarks: Prof. Michael Feuer</b> , George Washington University

## Appendix III: Bio-Briefs of Symposium Participants

### Expert team members (both stages of the activity)

#### **Noah Lewin-Epstein** (expert team chair)

Professor of sociology at Tel-Aviv University and past dean of the Faculty of Social Science. He is past president of the Israeli Sociological Society and at present, serves as secretary of the International Social Survey Programme (ISSP). His areas of interest include social inequality, migration and ethnic stratification, and comparative survey research. His recent publications have addressed such issues as migration and wealth inequality, public attitudes toward the welfare state, the incorporation of Arab citizens of Israel in the labor market, and the work-family nexus. His research has been published in a variety of journals including *American Journal of Sociology*, *International Migration Review*, *European Sociological Review*, *Journal of Marriage and Family*, and *Research in Social Stratification and Mobility*.

Prof. Lewin-Epstein received the PhD from the University of Chicago in 1982.

Member of the Initiative Steering Committee.

#### **Rami Benbenishty**

Professor in the School of Social Work at Bar-Ilan University where he heads the research team on Children and Youth at Risk. He is involved in projects which monitor school climate at the school, district and state levels. His main research interests are child welfare, school climate, decision-making, and the effective use of information.

Prof. Benbenishty earned his Ph.D. in social work and psychology from the University of Michigan in 1981.

He was a member of the Initiative's "Guidelines for Revising the System of Education Indicators in Israel" Committee, and chair of the expert team on "Therapeutic Interventions for Children with Behavioral Problems and Difficulties."

#### **Esther Adi-Japha**

Senior lecturer at Bar-Ilan University's School of Education and head of their Child Learning and Development center. Dr. Adi-Japha is a research fellow at the Gonda Multidisciplinary Brain Research Center. Her areas of interest include development of long-term skill memory consolidation ("how-to" knowledge), children's cognitive development, and assessing child development within the context of early childhood childcare settings.

Dr. Adi-Japha holds a PhD degree from the Hebrew University of Jerusalem's Interdisciplinary Center for Neural Computation, received in 1998.

**Yossi Shavit**

Professor of sociology at Tel Aviv University, and holds the Zalman and Sima Weinberg chair in Social Stratification and Inequality. He also served as the president of the Israeli Sociological Society, heads the Education Policy Program at the Taub Center for Social Policy Studies in Israel and is a member of the Sociological Research Association. He was previously a professor at the European University Institute, located in Florence. His main areas of research and teaching are educational stratification processes, education policy and occupational stratification, Jewish-Arab relations in Israel, marriage markets, and research methods.

Professor Shavit holds a PhD degree from the University of Wisconsin-Madison (U.S.), received in 1983.

**Fadia Nasser-Abu Alhija**

Professor in the School of Education at Tel Aviv University, where she heads the Program for Research, Measurement and Evaluation Methods. Previously, Prof. Nasser-Abu Alhija was research coordinator for GRE testing at the Educational Testing Service (ETS) in Princeton, NJ. Her research focuses on the methodology of measurement and evaluation of achievement as they relate to gender and culture, evaluation of teachers and teaching and, on the structural validity of testing methods.

Prof. Nasser-Abu Alhija holds a PhD degree in research, evaluation, measurement and statistical methods from the University of Georgia (US), received in 1997.

Member of the Initiative's Steering Committee, and in the past – member of the Initiative's committees on "measurement and evaluation in education", "diagnosis, assessment and evaluation in early childhood education", "knowledge base required for teaching secondary school mathematics" and "schooling for the 21st century". Member of the Steering team for the project.

**Moshe Justman**

Professor in the Department of Economics, Ben-Gurion University and former dean of its Faculty of Humanities and Social Sciences. His main areas of research are the political economy of education, equality of opportunity of and access to education, structure of the education system and its sources of funding and, measurement in the field of education. He has also extensively researched topics in industrial-technology policy and issues of regional development. Senior Fellow in the Van Leer Jerusalem Institute since 2007 and coordinator of activities on Civil Society at the Institute since 2012.

Prof. Justman earned his Ph.D. in business economics from Harvard University in 1982.

He was a member of the Initiative's Steering Committee and chaired the Initiative committee "studying revision of education indicators in Israel". Member of the steering team for the project.

**Analia Schlosser**

Senior lecturer at Tel Aviv University's School of Economics and a research fellow with the IZA, CESifo international research group. Her main areas of research interest are the economics of education, economic development, and labor economics. She has served in research positions within the Ministry of Education's Evaluation Department and has been a participant in various

public committees. Her post-doctoral studies were carried out at Princeton University in the United States.

Dr. Schlosser holds a PhD degree from the Hebrew University of Jerusalem, received in 2007.

She was a member of the Initiative's "Who Will Teach in a Teacher Shortage? Analysis of Three Strategies for Coping With a Shortage of Teachers" Team.

## **Special consultants for the activity**

### **Richard Murnane**

Economist and the Thompson Professor of Education and Society at the Harvard Graduate School of Education (HGSE) and a research associate at the National Bureau of Economic Research. In 2011, Murnane and his colleague, John Willett, published the book *Methods Matter: Improving Causal Inference in Educational and Social Science Research* (Oxford U. Press). In recent years he has pursued two lines of research: With MIT professors Frank Levy and David Autor, he has examined how computer-based technological change has affected skill demands in the United States' economy, and the effectiveness of educational policies in responding to changing skill demands. Murnane and Levy have written two books on this topic. The second line of research examines the respects in which the growth in family income inequality in the U.S. has affected educational opportunities for children from low-income families and the effectiveness of alternative strategies for improving life chances for these children. Murnane coedited (with Greg Duncan) the 2011 volume, *Whither Opportunity: Rising Inequality, Schools, and Children's Life Chances* (Russell Sage). Harvard Education Press will publish Duncan and Murnane's own book on this topic, *Restoring Opportunity: The Crisis of Inequality and the Challenge for American Education*, in January 2014.

### **Michael J. Feuer**

Dean of the Graduate School of Education and Human Development at George Washington University, and President of the National Academy of Education. For the previous 17 years he held several positions at the National Research Council of the National Academies, most recently as the executive director of the Division of Behavioral and Social Sciences and Education. Prior to joining the NRC Feuer was senior analyst and project director at the US Congress Office of Technology Assessment. He received a BA in English literature from Queens College of the City University of New York, an MA in public management from the Wharton School, and the PhD in public policy analysis from the University of Pennsylvania. Feuer has lived in Israel and France, studied at the Hebrew University and the Sorbonne, and was on the faculty of Drexel University from 1981-1986. He has published in numerous academic journals and has had reviews, articles, and poems in newspapers and magazines in Washington, Philadelphia, Los Angeles, and New York. Michael's most recent book is *Moderating the Debate: Rationality and the Promise of American Education*, published by Harvard Education Press in 2006. He is the president of the National Academy of Education, a fellow of the American Association for the Advancement of Science, and a fellow of the American Educational Research Association. Michael lives in Washington with his wife, Regine B. Feuer. The Feuers have two grown children.

### **Michael S. McPherson**

President of the Spencer Foundation. Prior to joining the Foundation in 2003 he served as President of Macalester College in St. Paul, Minnesota for seven years. A nationally known economist whose expertise focuses on the interplay between education and economics, McPherson spent the 22 years prior to his Macalester presidency as professor of economics, chairman of the Economics Department, and dean of faculty at Williams College in Williamstown, Massachusetts. He holds a B.A. in Mathematics, an M.A. in Economics, and a Ph.D. in Economics, all from the University of Chicago.

McPherson, who is co-author and editor of several books, including *College Access: Opportunity or Privilege?*, *Keeping College Affordable and Economic Analysis*, *Moral Philosophy*, and *Public Policy*; was founding co-editor of the journal *Economics and Philosophy*. He has served as a trustee of the College Board, the American Council on Education, and the Minneapolis Institute of Arts. McPherson has been a Fellow of the Institute for Advanced Study and a Senior Fellow at the Brookings Institution.

## **Writers of the scientific reviews**

### **Audrey Addi-Raccah**

Senior lecturer in the Educational Administration, Policy and Leadership Program at Tel Aviv University, and serves as the program head. Her areas of research include social inequality and the sociology of teaching, and educational administration. In her research, Dr. Addi-Raccah pays special attention to issues of inequality in education systems, the feminization of administration, on the work of principals and more recently, on the relationship between the school and the surrounding environment and community.

Dr. Addi-Raccah holds a PhD degree in sociology from Tel Aviv University, received in 1997.

Author of the literature review on trends in residential segregation or integration as a function of students' socioeconomic status.

### **Ron Astor**

He is a professor at the University of Southern California (USC), teaching at both the School of Education and School of Social Work. His earlier work examined the impact of physical, social-organizational and cultural contexts on different types of violence in schools (e.g., sexual harassment, bullying, school fights, emotional abuse, weapon use, and teacher/child violence). More recently, Prof. Astor's research has primarily focused on supportive and positive school climates in schools with a high percentage of pupils from American military families.

He holds a PhD in Education and Psychology from the University of California, Berkeley in 1991.

Co-Author of the literature review on socioeconomic inequality, school/class climate and their relationship to achievements in education.

**Hana Bahak**

PhD student in the School of Education at Tel Aviv University and a researcher in the Open University's Department of Evaluation. Her area of interest is access to higher education. She teaches social psychology and psychology of aging at the Open University, some classes are web-based synchronic classes.

Ms. Bahak holds a BA degree in psychology and criminology from Bar-Ilan University, received in 1981, an MA degree in communications from Hebrew University, received in 1989, and a certificate in medical psychology from Tel Aviv University, received in 2003.

Co-author of the literature review on trends in residential segregation or integration as a function of students' socioeconomic status.

**Ruth Berkowitz**

Lecturer/tenure track faculty member in the School of Social Work at the University of Haifa. Dr. Berkowitz researches the education system and ways of improving students' emotional and academic outcomes via schools that have a positive climate and thereby help to reduce social disparities. She is also involved in researching schools as learning systems and ways in which the school's performance as an organization can be improved. In addition, Dr. Berkowitz studies violence among youth, the characteristics of youths who play different roles in situations of violence, and the relationship between bullying and victimization among students.

Dr. Berkowitz holds a PhD in social work from Bar-Ilan University and is certified as a psychotherapist through the Hebrew University of Jerusalem.

Co-Author of the literature review on socioeconomic inequality, school/class climate and their relationship to achievements in education.

**Nachum Blass**

Mr. Blass has been conducting research in the field of education for the past 45 years. During that time, he has held various positions, including assistant director of the Ministry of Education, director of the Office of the Chief Scientist in the Ministry of Education, director of the Social Planning Department, and director of the Institute for the Development of Education and Welfare. Since 1989, he has been an independent researcher. Mr. Blass has coordinated various projects, such as education planning for the 1980s, preparation for absorbing the influx of Russian immigrants, and planning for extended school days, as well as participating in the Shoshani Committee for funding primary education and two other subcommittees in the National Task Force for the Education System. Mr. Blass has been a senior researcher at the Taub Center for the past 25 years.

Author of the literature review on trends in resource investment in education for different socioeconomic classes in Israel.

**Yael Grinshtain**

Member of the teaching staff at the Open University, Department of Education and Psychology, and a lecturer at Tel Aviv University and Tel Hai Academic College. She investigates gender-

related aspects of teaching and school leadership, and the perceptions of educators regarding their work at school and its environment, in the Jewish and Arab sectors and in the center and the periphery of the country. She teaches educational psychology, educational sociology, school management, qualitative research methods, and development of academic skills.

Grinshtein has a Ped from Tel-Aviv University, 2015.

Co-author of the literature review on trends in residential segregation or integration as a function of students' socioeconomic status.

### **Smadar Moshel**

General Grants Associate at Yad Hanadiv. Dr. Moshel recently completed her PhD at the Hebrew University of Jerusalem in the field of early childhood education policy. She was employed for two years at the Gilo Centre for Civic Education and Democracy as the Coordinator of the MA internship in Citizenship and Democracy. She joined Yad Hanadiv in 2007.

Dr. Moshel holds a BA in philosophy, political science and economics and an MA in political science from the Hebrew University.

Author of the literature review on early childhood education as a means of reducing inequality and social gaps: Research, policy, and practice.

### **Hadass Moore**

She is pursuing a doctorate in Social Work at the University of Southern California (USC). Moore previously served as a counselor for immigrants from the former Soviet Union, and today works with refugees and torture victims from Eritrea in the field of therapeutic work and mental health. She is also a research assistant in the Ministry of Social Welfare's "Results" project. Her fields of interest include: the school's role in crisis situations (such as terror, war, regional conflicts) and in extreme life situations (e.g., homeless youth).

She holds a bachelor's degree and a master's degree in Social Work from Hebrew University of Jerusalem, 2014.

Co-Author of the literature review on socioeconomic inequality, school/class climate and their relationship to achievements in education.

## **Presenters, respondents and participants in the seminars and the symposium**

### **Ayman Agbaria**

Lecturer in the Department of Leadership and Policy in Education at the University of Haifa. He has held senior positions at the Israel Association of Community Centers, the Shatil organization of the New Israel Fund and at Beit Berl College and has also served as a senior consultant to the Follow-up Committee on Arab Education and as a member of the Ministry of Education's Civics Studies Committee. He is also a co-founding member of Dirasat, The Arab Center for Law and

Policy. He specializes in education amongst ethnic and religious minorities and researches policy and pedagogy for civics education, Islamic education and teacher training.

Dr. Agbaria holds two MA degrees, one in international development and social change from Clark University, and the other in criminology from the Hebrew University of Jerusalem. He also holds a dual doctoral degree in educational theory and policy and in international and comparative education from Pennsylvania State University.

### **Dorit Aram**

Associate professor in the Department of School Counseling and Special Education in the School of Education at Tel Aviv University and head of the department's Educational Counseling program. 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. 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 (OMEPE). 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 PhD degree in education from Tel Aviv University, received in 1998.

Member of the Initiative's Committee on An Education System for All and for Each and Every One.

### **Efrat Aran**

Heads the social mobility section in the R&D department of the Rashi Foundation. In this capacity she leads the Foundation's joint learning and implementation project with Yad Hanadiv on social mobility. The project's goal is to support a process of deep learning and thought by academics and practitioners in the field and help create a systematic and usable conception of social mobility in Israel, with the emphasis on the individual perspective and the abilities a person needs in order to achieve social mobility. Aran is a graduate of the Mandel School for Educational Leadership, which she was a fellow after many years at Intel in the fields of production engineering, operations, and strategic planning.

She holds a BSc in industrial engineering from Tel Aviv University and an MBA from the Kellogg-Recanati program.

### **Abraham Arcavi**

Professor of science education at the Weizmann Institute Department of Science Education, which he headed from 2001 to 2005. His research focuses on teaching and learning high school mathematics. His post-doctoral work was carried out at the University of California, Berkeley.

Prof. Arcavi holds a PhD in mathematics education from the Weizmann Institute in 1986

He was the Chairman of the Initiative's Committee on An Education System for All and for Each and Every One, and a member of the Knowledge-base for Teaching Mathematics and Education System Indicators committees.

**Shirley Avrahami**

Director, Knesset Research and Information Center.

Dr. Avrami holds a PhD degree in philosophy from the University of Haifa, received in 2003.

**Shirley Babad**

Head of education Field at the Budget Department, Ministry of Finance. Formerly she served as a teaching assistant at Ben-Gurion University of the Negev.

She holds a master's degree in economics from Ben-Gurion University of the Negev.

**Anat Bar**

Founder and director of the HaPAOT Center – Enrichment, Activity and Therapy for Preschoolers – in the city of Tirat HaCarmel. She is an advisor to the Steinmetz Foundation in the area of early childhood and a lecturer at the University of Haifa in the Master's degree program in the same field.

Ms. Bar holds an MA degree in art therapy and educational counseling from the University of Haifa, received in 1988, certification from the “Mifne” Institute (early intervention in the treatment of autism), and certification from The Association for Family Therapy.

**Sandy Baum**

An independent higher education policy analyst and consultant and a Senior Fellow at the George Washington University Graduate School of Education and Human Development and Professor Emerita of Economics at Skidmore College, where she is currently a member of the Board of Trustees. She has written and spoken extensively on issues relating to college access, college pricing, student aid policy, student debt, affordability, and other aspects of higher education finance. Dr. Baum is a Senior Associate at the Institute for Higher Education Policy, Affiliated Consultant for HCM Strategists, and consultant to the College Board, where she has co-authored the annual publications *Trends in Student Aid* and *Trends in College Pricing* since 2002. Prof. Baum chaired a Brookings Institution study group that issued its report, *Beyond Need and Merit: Strengthening State Grant Programs* in May 2012.

Dr. Baum holds a PhD in economics from Columbia University.

**Michal Beller**

Founding director general of the National Authority for Measurement and Evaluation in Education (RAMA), established in 2005. Her area of expertise is educational testing and evaluation. Prior to her present position, she was for several years a senior research director of R&D at the Educational Testing Service (ETS) in Princeton, NJ, the largest testing institute in the world. For a period of eight years, before joining ETS, Prof. Beller served as director of the Israeli National Institute for Testing and Evaluation (created by the Israeli universities) and was a faculty member in the Department of Education and Psychology at the Open University where she founded and directed the Center for Technology Integration for Distance Teaching. Prof. Beller has published many articles in the field of educational measurement and evaluation, participated in many international

conferences, where she represented Israel, and serves as a member of professional steering committees in Israel and around the world.

Prof. Beller holds a PhD in psychology from the Hebrew University, 1983.

She was a member of the Initiative committee studying educational measurement and evaluation and retired from the committee upon her appointment as RAMA's director general.

### **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 PhD degree in science teaching from the Weizmann Institute of Science, received in 2002

Member of the Initiative's Committee on an Education System for All and for Each and Every One.

### **Amy Berman**

Deputy Director of the National Academy of Education and a graduate research assistant at the George Washington University Graduate School of Education and Human Development (GSEHD). Prior to that she was an education civil rights lawyer as an Enforcement Director at the U.S. Department of Education's Office for Civil Rights and Section Chief at the U.S. Department of Justice, Civil Rights Division, Educational Opportunities Section.

She holds a J.D. from Harvard Law School and B.S. from Cornell University and is a doctoral candidate in education leadership and policy at GSEHD.

### **Maya Choshen**

Senior research fellow at the Jerusalem Institute for Israel Studies. The primary focus of her work is in the fields of population and society in Jerusalem. She is the editor of the Statistical Yearbook of Jerusalem and is a lecturer at the School of Education of the Hebrew University. She engages in research, planning, and teaching. Dr. Choshen has led and participated in dozens of research projects, programs, and work groups on population, society, and community and their connection to all fields of life in the city of Jerusalem, the Jerusalem region, and Israel as a whole.

### **Efrat Degani-Toperoff**

The content development coordinator for education at Yad Hanadiv. She is one of the founders of the *Ma'agalei Tzedek* (Circles of Justice) association in which she is still active and serves as chairperson of its board of directors. She previously directed the association's education division.

Ms. Degani-Toperoff also founded the Good Neighbor and Israeli Mosaic associations, and established and coordinated a community activities program for the Hartman experimental religious high school in Jerusalem.

She received a master's degree from the Schwartz Program in Management of Non-profit and Community Organizations in 2008, and a bachelor's degree in Talmud and Judaic Studies in 2004, both from the Hebrew University of Jerusalem.

Ms. Degani-Toperoff is also a graduate of the Mandel School for Educational Leadership.

### **Avner De-Shalit**

Prof. De-Shalit served as head of the Political Science Department at Hebrew University of Jerusalem and as a research fellow at the Oxford Centre for Environment, Ethics and Society. His research focuses on the environment, political disadvantage and social justice. Together with Prof. Nathan Zussman and Prof. Danny Attas, he founded the interdisciplinary program: Philosophy, Economics and Political Science (PEP) at Hebrew University. He served as dean of the Faculty of Social Sciences from 2008-2012. Prof. De-Shalit received the Rector's Prize for Research in 2007 and the Rothschild Prize for 2013-2014. Prof. De-Shalit was one of the founders of the New Movement, which joined Meretz. From 2007-2009, he led the team that submitted the "Green Vision for Israel" document to the Ministry of Finance.

Prof. De-Shalit received a bachelor's degree in Political Science and Humanities from Hebrew University and a PhD in Political Science from Oxford University (1990).

### **Yariv Feniger**

Lecturer in the Department of Education at Ben-Gurion University of the Negev and is a fellow in the Education Policy Program at the Taub Center for Social Policy Studies in Israel. Dr. Feniger's areas of interest include social and educational inequality, minority education, gender and education, current developments in educational policies and the effects of national and international measurements of achievement on learning, instruction and education administration. His current research focuses on social inequality in access to higher education in Israel and on the influence of the *Meytzav* tests on elementary schools. Dr. Feniger is the co-editor of an upcoming volume with Dr. Nissim Mizrahi and Prof. Yossi Yonah entitled *The Politics of Difference in Israeli Education: A View from Below*.

He holds a PhD in sociology and anthropology from Tel-Aviv University.

### **Gal Fisher**

Education program Director, Yad Hanadiv. Gal established the R&D Division at The Branco Weiss Institute, and has vast experience in teacher training and bringing about school change. Prior to joining Yad Hanadiv, Gal spent five years as Director of Research and Development at Avney Rosh – The Israel Institute for School Leadership.

He holds an MA in Cultural Studies and Hermeneutics from Bar-Ilan University and is a graduate of the Mandel Institute Programme in Educational Leadership.

### **Shahaf Gal**

Advisor to the Ministry of Education's Research and Development, Experiments and Innovations Division where he is involved in overseeing and developing a supervised school choice regional plan the division is putting into place. He is also involved in mediating the space between policy and implementation: in setting up and developing education systems in Israel and other countries and in formulating conceptions of development that encourage cooperation between head-office entities, academia and the field. He has a great deal of experience, both in the United States and in Israel, developing pedagogical products that incorporate technology for teacher networks and classroom implementation.

Dr. Gal holds a PhD degree in education policy from Harvard University, received in 1994.

### **Josh Glazer**

An associate Professor of Education and George Washington University. His research interests are in the areas of school improvement, education policy, school networks, and educational professionalism. Prior to joining GW/GSEHD, Prof. Glazer spent five years at the Rothschild Foundation, in Israel, where he was Program Officer and then Director of the education department. He and his colleagues at the foundation led a major initiative to improve teaching and learning in the area of middle-school literacy, and supported various other programs directed at improving instruction in Israeli schools. While at the University of Michigan, Prof. Glazer participated in the Study of Instructional Improvement, a six-year study that examined the design, implementation, and effects of three leading comprehensive school improvement programs. *Improvement by Design*, the book that reports on the findings from this study, is expected to be published in late 2012 by the University of Chicago Press. Prof. Glazer has published articles on educational professionalism, comprehensive school reform, and on the design and function of school improvement networks.

Prof. Glazer hold a PhD in Education from the University of Michigan.

### **Hagit Glickman**

General-director of the National Authority for Measurement and Evaluation in Education (RAMA), and the director of Research and Development Division. In recent years she involves in a large variety of research projects in the area of education; including designing and analyzing large scale assessments and surveys, cross sectional studies and longitudinal studies, evaluation of educational programs, and developing applied statistical and psychometric methodologies.

She has a PhD in Statistics from the Hebrew University of Jerusalem (since 2000).

### **Ora Goldhirsch**

Psychologist, developmental expert, and psychotherapist. She has been working in the Ministry of Education's Pre-Primary Education Branch since 1994 and is currently the coordinator of the unit for Therapy for Individuals and Special Needs Populations. In the capacity of her role at the Ministry of Education, she has been a member of professional ministerial and inter-ministerial committees, was involved in writing many policy papers, pamphlets and documents for education

staffs, has lectured at conferences, led and moderated groups of professionals, and more. In the past, she worked as a psychologist for the Educational Psychology Counseling Service in Afula and Tel Mond, and at the Early Childhood Center in Kfar Saba. She was also a lecturer and pedagogic counselor in the early childhood program at Beit Berl College.

Ms. Goldhirsch holds an MA degree in psychology from Tel Aviv University, received in 1990, and in 2000, completed the University of Haifa's advanced training program in psychotherapy.

### **Daniel Gottlieb**

Joined the National Insurance Institute in 2008 as Deputy Director-General of Research and Planning. He previously was with the Bank of Israel and the International Monetary Fund. In his most recent position at the Bank of Israel, Dr. Gottlieb served as senior economic advisor to three bank governors – Jacob Frenkel, David Klein and Stanley Fischer. Dr. Gottlieb began working at the Bank of Israel as a young economist in the Economics Unit of the Foreign Exchange Department and then served as senior researcher in the Bank's Research Department. During his career, he has researched topics such as monetary policy, inflation, balance of payments, public debt, optimal official foreign exchange reserves, sovereign risk, liberalization of foreign exchange, macro-economic policy and public policy. Since 2000, his work has focused upon socio-economic policy, in particular on issues of poverty and the labor market. From 1986 to 1988, Dr. Gottlieb worked as an economist for the International Monetary Fund. During the years Dr. Gottlieb has been teaching economic policy and in recent years socio-economic policy, mainly at the Ben-Gurion University and at the Hebrew University of Jerusalem.

Dr. Gottlieb holds a PhD degree in economics, received from the Hebrew University of Jerusalem. His earlier degrees are from the London School of Economics and Zurich University, Switzerland.

### **Eli Gottlieb**

Director of the Mandel Leadership Institute and vice president of the Mandel Foundation–Israel. Dr. Gottlieb has served as a visiting professor in cognitive studies in education at the University of Washington, an adjunct lecturer at the school of education at the Hebrew University and a visiting scholar at the Carnegie Foundation for the Advancement of Teaching.

Dr. Gottlieb holds degrees in philosophy and developmental psychology from the University of Cambridge and a doctorate in the psychology of education from the Hebrew University of Jerusalem, 2002.

### **Colin Green**

Associate Professor of Curriculum and Pedagogy in the School of Education and Human Development at The George Washington University. His teaching and research interests lie at the intersection of curriculum foundations, schooling and identity development, and urban teacher education. He is a former public school teacher and administrator in Northern Ireland, and is currently coordinator of the MA Curriculum and Instruction program and a new certificate

program entitled “Incorporating International Perspectives in Education”. He is the recipient of an Israel Institute faculty development grant to support the incorporation of more Israel-focused content into master’s and certificate program coursework.

**Sima Hadad Ma-Yafit**

Head of Preschool Education Division, Ministry of Education, since 2008. The division is responsible for preschool institutions for children aged 3-6. Previously she held the position of Inspector Coordinator of the Central Region Preschool Inspectors, after having gathered experience as a Regional Preschool Inspector. At the Beit Berl College School of Education she lectured in “Educational Administration and Organization” and “Group Dynamics.”

She is a graduate from the Mandel Leadership Institute in Senior Staff Educational Leadership and holds an MA degree in Educational Processes from the Hebrew University of Jerusalem.

**Noa Heymann**

Manager, Education Sector, Budget Division, Ministry of Finance. In the past she served as a research assistant in the Bank of Israel.

Ms. Heymann holds a BA degree in the combined philosophy, economics and political science program, received from the Hebrew University of Jerusalem.

**MK Yousef Jabareen (Joint [Arab] List)**

A jurist – an attorney and law lecturer at the University of Haifa and at Tel-Hai College. MK Jabareen was the executive director of Dirasat, the Arab Centre for Law and Policy, a Sikkuy board member, and an attorney with ACRI, the Association for Civil Rights in Israel

MK Jabareen holds an S.J.D. degree from Georgetown University (US), received in 2003.

**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.

Karsenty holds a PhD degree in mathematics education from the Hebrew University in Jerusalem, received in 2002.

Member of the Initiative’s Committee on an Education System for All and for Each and Every One.

**Sarah Kass**

Chief Programme Officer, Yad Hanadiv. From 2004 was Director of Strategy and Evaluation for the AVI CHAI Foundation, and has lived in Israel since 2006. Graduated from Yale University summa cum laude and Phi Beta Kappa, and from Oxford University where she was a Rhodes Scholar. In the 1990s, she founded and led one of the first charter public high schools in the United States.

**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 MA 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 “Rafal’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.

Member of the Initiative’s Committee on An Education System for All and for Each and Every One.

**Mona Khury-Kassabri**

Associate professor 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. She conducts research in the areas of violence in schools, juvenile delinquency, children's rights, and bullying on the internet.

Dr. Khury-Kassabri holds a PhD degree in social work from the Hebrew University of Jerusalem, received in 2002.

Member of the Initiative’s Committee on An Education System for All and for Each and Every One.

**Ruth Klinov (RIP)**

Professor emeritus in the department of Economics, the Hebrew University in Jerusalem. Previously Prof. Klinov served as a project director of the center for research of social policy in Israel, and as an economist for the World Bank, her research Interests are Labor markets: supply, mobility, migration, wage structure. Economics of education: human capital, supply of educational services.

She holds a PhD in Economics from the Hebrew university, 1964.

**Einav Luke**

Director of the unit to Promote a Safe Climate and Reduce Violence at the Psychological Counseling Service (PCS), Ministry of Education; was previously involved in coordinating training of counselors on the issue of climate for the Southern district. Ms. Luk has 20 years of experience in the field of educational psychology. Within the framework of her roles at the Ministry of Education, Ms. Luk took part in writing many policy papers including the director-general's memorandum on "Promoting a Safe Climate and Coping with Incidents of Violence in Educational Institutions 2010 1(a)" and "The Program to Promote a Safe Climate and to Reduce Violence, An Outline for Targeted Schools."

Ms. Luk holds an MA degree in educational counseling from Tel Aviv University, received in 1994.

**David Maagan**

Heads the Statistics of Higher Education and Teaching Personnel sector at the Central Bureau of Statistics. In this capacity, he has conducted a series of studies that were presented at professional conferences concerning various aspects of the teaching force, student achievement, and long-term follow-up on various populations in the education system. He is also a policy fellow (education) in the Education Policy program at the Taub Center for Social Policy Studies in Israel and has also served as a member of a Ministry of Education committee examining teacher training in the Arab sector. He was a member of the RAMA (National Authority for Assessment and Evaluation of the Education System) steering committee for the international TALIS Survey (OECD Teaching and Learning International Survey). He also served as an observer on the Dovrat Commission's sub-committee on teachers' wages (the National Task Force for the Advancement of Education), and represented Israel in OECD work groups of the INES Network on Labour Market, Economic and Social Outcomes of Learning.

Mr. Maagan holds an MA degree in sociology received from the Hebrew University and is currently studying for a PhD in education at Bar-Ilan University.

**MK Yakov Margi (Shas Party)**

Chair of the Knesset Education, Culture and Sports Committee. MK Margi has been serving as a Knesset Member since 2003 (the 16<sup>th</sup> Knesset), and in the 18<sup>th</sup> Knesset, he served as the Minister of Religion. Prior to serving in the Knesset, he was the Shas Party's general manager. He worked at the Nuclear Research Center in Dimona for 11 years. He also served as the city of Beersheba's head of the Religious Council and was greatly involved in activities for distressed youth, in helping needy families, and in giving Torah lessons.

**Dudi Mizrahi**

Director of the budgeting department in the Israeli Ministry of Education. In his former role in the MOE he was an advisor to Mr. Shimshon Shoshani, the ministry's director general. Before arriving at the MOE Mizrahi served as a project manager at the Foreign Investment Promotion Center in

the Ministry of Industry, Trade and Labor, and an analyst for the wage and labor department at the finance ministry.

Mr. Mizrachi holds a Master's Degree (MBA) in Business Administration from the Hebrew University in Jerusalem.

### **Flora Mor**

Psychotherapist and senior area head of the education program in the Joint (JDC-Israel) program for at-risk children and youth at Ashalim (services for young at-risk populations). During the course of her work, she formulated the psycho-social educational approach, based on two decades of effective clinical practice focused on at-risk students' wellbeing and development, and on doctoral research she conducted that addressed characteristics of effective educational and pedagogical practice with underachieving at-risk students in distress. As a result of this research, she developed a rich knowledge base that links different disciplines (philosophy, psychology, sociology and education) and in the spirit of the psycho-social educational approach, integrates basic concepts, methods, strategies and implementation tools in order to promote educational practice in school among at-risk children and youth and their parents.

Dr. Mor holds a PhD degree in education from the University of Sussex (U.K.), received in 2013.

### **Yoel Rapp**

He is a former head of the Israeli Psychometric Association and director of the Testing Division at the National Authority for Measurement and Evaluation in Education (RAMA). His areas of expertise are psychological and educational measurement and assessment, and psychometrics and test development. The division is responsible for developing measurement tools (tests and questionnaires) to assess educational outcomes (academic achievements, values, school performance) that will serve as a source of comprehensive evaluation for the Israeli education system. Among other things, the division develops the GEMS (Growth and Effectiveness Measures for Schools) tests and is responsible for translating and adapting the tests from Hebrew to Arabic. The division is also charged with developing formative measurement instruments and manages Israel's participation in international studies in the education field (such as PISA and TIMSS), which includes translating and adapting the tests and questionnaires.

Holds a PhD in cognitive-experimental psychology from Tel Aviv University.

### **Dmitry Romanov**

Dr. Romanov has held the position of Chief Scientist at the Central Bureau of Statistics (CBS) since 2005. He is responsible for the statistics related to the education system, education and the teaching force, the social survey, the longitudinal survey, the PIAAC (Programme for the International Assessment of Adult Competencies), and for methodology development and socio-economic research at the CBS. He also serves as a scientific editor of the "Face of Israel Report." Prior to joining the CBS, Dr. Romanov worked at the Bank of Israel as an economist in the Research Department and was also with the Ministry of Finance in the State Revenue

Administration. His areas of research activity are labor economics, education economics, public economics and survey methodology.

Dr. Romanov holds a PhD degree from the Hebrew University of Jerusalem, received in 2002.

### **Miriam K. Rosenthal**

Professor (emerita) at Hebrew University's School of Social Work; currently, she heads two training programs for education and welfare staffs employed in preschool and day care settings in Israel. The programs focus on deepening the teaching staffs' knowledge and insights as they relate to educational frameworks during the first years of life, including support for emotional-social development. The programs take place with the support of the US-based Haas Foundation and the Harris Foundation as well as the Israel Ministry of Education and the Ministry of Welfare and Social Services. Professor Rosenthal serves as a consultant to research, public and governmental organizations on topics of research and policy in the field of early childhood development and education. She is also a member of public commissions that address toddlers' development and education, as well as training of education personnel to work in education settings for children, aged birth to four. Her most recent research focuses on (both at-risk and normative) toddlers' daily experiences in group care settings in Israel and relates to the policy that determines their quality. In recent years, she has used an ecological approach in her research of the education-care given to preschool children, which examined cultural and social influences on toddlers' development and education, and aspects of policy that either supports them or not.

Professor Rosenthal holds a PhD degree, received in 1965, from Stanford University in the United States.

### **Hana Shadmi**

Director of Division A of the Psychological Counseling Service (PCS) in the Ministry of Education; previously directed the Assistance and Prevention Programs Division at the PCS and prior to that was involved in developing and managing the Life Skills Program. Ms. Shadmi has 35 years of experience in the field of educational counseling. Within the framework of her roles at the Ministry of Education she took part in writing many policy papers including the standards for school climate, and the director general's memorandum on the topic of "Promoting School Climate and Reducing Violence, An Outline for the Planning and Operation of a School Program for Preschool through 12th Grade.

Ms. Shadmi holds an MA degree in educational counseling from Tel Aviv University, received in 1980.

### **Yael Shalgi**

Chief of Organizational Learning and Strategy, Yad Hanadiv. Born in the US. Immigrated to Israel in 1975. Holds a BA in Economics and International Relations and an MA in International Relations from The Hebrew University of Jerusalem. Served as an IDF Intelligence Officer. Previous positions she held included: Founding Director of Israel Philanthropy Advisors, a non-profit consulting firm; VP, Community Investment, Matan – Your Way to Give; Assistant Director

of Israel's umbrella organization of non-profits, and Lecturer in the MA Programme on Non-profit Management at The Hebrew University.

### **Yehudit Shalvi**

Founder and executive director of Avney Rosha, the Israeli Institute for School Leadership. She previously headed the Jerusalem municipality's Educational Administration and from 2004 to 2007 served as the municipality's deputy executive director and was responsible for all the city's social affairs and services departments. From 1987 to 1997, she was principal of the Givat Gonen Secondary school. Ms. Shalvi sits on the board of directors of the Khan Theatre and the Taub Center for Social Policy Studies in Israel. Ms. Shalvi has attended various courses in the fields of education, leadership and management and was certified to teach humanistic subjects by the Kerem Institute for Teacher Training.

She holds a BA degree in Jewish thought and Jewish history from the Hebrew University of Jerusalem, received in 1980, and an MA degree in Educational Administration and Leadership from Tel Aviv University, received in 2006.

Member of the Initiative for Applied Education Research steering committee.

### **Yael Shapira**

Assistant Director of International Relations at the George Washington University Graduate School of Education and Human Development (GSEHD). She has worked on programs to provide access to education for marginalized populations in Israel, Ethiopia, India and Niger. She was born and raised in Jerusalem.

She holds a MA in International Education from GSEHD and a BA in International Relations from Boston University.

### **Varda Shiffer**

Research Fellow, the Van-Leer Jerusalem Institute, in the past she was the President of Mandel Foundation, Israel; Founder and director of Mandel Center for Leadership in the Negev; Director of Mandel School (now renamed – Mandel Leadership Institute) in Jerusalem; Chief Scientist of the Civil Service Commission; and head of unit in charge of the audit of the education system, at the State Comptroller's Office. Past Academic positions: Lecturer at Ben-Gurion University in the Negev – School of Management; Editor of *Civil Society and Third Sector in Israel* – a peer reviewed periodical; Senior Associate Member, St. Antony's College, Oxford; Adjunct Lecturer – Hebrew University of Jerusalem; Teaching and research assistant – McGill University, Montreal.

Member of the "Experts' Committee" for the Social protest movement; Member of the Advisory Committee on Ethics in Public Organizations – the Israel Institute for Ethics; Member of the Public Committee on Government Policy towards the Third Sector in Israel; Member of International Council and former Chairperson of the Grants Committee of New Israel Fund; Member of Amnesty International Israel section and former Chairperson of the Israel section.

**Michal Shinwell**

Senior Economist at the National Economic Council Previously Head of Environment Field at the Budget Department, Ministry of Finance, and an Economic Consultant at a private firm for Economic Consulting (SYS).

Holds a BA in Politics, Philosophy and Economics from the Hebrew University, and an Honors' MBA from Ben Gurion University at the Negev.

**Esther Sobol**

Analyst and researcher in the Research and Development Department of the Rashi Foundation. In this capacity she takes part in the foundation's work to develop social mobility. Ms. Sobol has varied experience in working with the Third Sector in Israel and Europe and has been involved in running leadership programs, R&D, and fundraising.

She holds a BA from the Hebrew University in international relations and French literature and an MA in European politics and economics from the University of Bonn (Germany).

**Hanna Swaid**

Executive director of the Arab Center for Alternative Planning. Formerly, he was a Hadash Party (the Democratic Front for Peace and Equality) Member of Knesset. He also served as the head of the Eilabun Regional Council and was a member of the National Council for Planning and Construction. From 1990 to 1993 he was a lecturer and researcher at the University of Reading, in the UK.

Dr. Swaid holds a PhD degree in civil engineering and urban planning, received from the Technion in 1988.

**Esther Toledano**

Senior researcher at the Research and Planning Administration of the National Insurance Institute of Israel. Works regularly in the field of research on the following social insurance branches: maternity, children, maintenance (alimony) and unemployment. Mrs. Toledano has also carried out empirical research on work and occupation, in conjunction with various colleagues from the National Insurance Institute, the Bank of Israel, the Central Bureau of Statistics and from leading universities. She has important expertise in managing and analyzing big administrative data sets. She is also an expert in combining and utilizing data from different sources.

Esther holds a first degree in Mathematics and Statistics from the Hebrew University as well as a second degree in education.

**MK Manuel Trajtenberg (Zionist Union)**

Economist and professor of economics. He has been a professor of economics at Tel Aviv University since 1983. From 2006 to 2009, he served as chairperson of the National Economic Council in the Prime Minister's Office, and from 2009 to 2014, he was chair of the Planning and Budgeting Committee in the Council of Higher Education. Professor Trajtenberg has held a many

public positions. Among others, he was a member of the Brodet and Shochat Committees and a member of the board of directors of the Israel Democracy Institute. He served as head of the Committee for Socio-Economic Change, established following the social protests in the summer of 2011.

Professor Trajtenberg holds a PhD degree from Harvard University (US), received in 1984.

**Shay Tzur**

Economist, Research Department, Bank of Israel.

**Ami Volansky**

Expert on education policy and policy for higher education, and a leading researcher in the field of education reform. Professor Volansky has served as an advisor to numerous prominent organizations and has been hosted as a guest of many education systems abroad. Upon completion of his doctoral studies at Oxford in 1991, he joined Tel Aviv University's School of Education and has since prepared generations of students who now serve in many positions in the education system. For nearly thirty years, he held a series of senior positions at the Ministry of Education and advanced many issues such as, formulation of policy for alienated youth, development of the HILA program to help youth complete their education, implementation of the college reforms, transfer of the budget allocation for regional colleges from the Ministry of Education to the Council on Higher Education's Planning and Budgeting Committee, initiation of the "Matriculation 2000" program with the IDF (Israel Defense Forces), and others. Professor Volansky retired from the Ministry of Education in 2003 and has subsequently taken on other roles in the field of education. Since 2013, he has been the Ministry of Education's chief scientist.

Professor Volansky holds a PhD degree from the University of Oxford, received in 1991.

**Yuval Vurgan**

Mr. Vurgan serves as an education team leader, one of three multi-disciplinary teams, at the Knesset Research and Information Center. Previously, he was the Center's senior researcher on the Education, Culture and Sports Committee.

He holds an MA degree in democracy studies and a Teaching Diploma in civics, both from the Open University of Israel.

**Ariel Weiss**

Chief executive, Yad Hanadiv foundation. Holds a law degree from Georgetown University and a BA from Yale College. Prior to his Aliya to Israel in 1985, served for twelve years in various positions in the US House of Representatives, including as Director of the Democratic Steering and Policy Committee. Practiced law in Israel, maintaining associations with the Boston firm of Mintz, Levin, and with Herzog, Fox and Neeman in Tel Aviv. Employed at Yad Hanadiv since 1992; Chief Executive since 1999.

**Eti Weissblei**

Researcher, Knesset Research and Information Center. In her role at the Center, she has been involved for the past decade in writing research and information documents for Knesset committees and Members of Knesset, mainly in the field of education and children's rights.

Ms. Weissblei holds an MA degree (Honors) in an individually-tailored interdisciplinary program from the School of Jewish Studies at the Hebrew University of Jerusalem, and a BA degree (Honors) in Jewish studies and general and comparative literature, also from the Hebrew University of Jerusalem.

**James H. Williams**

Associate Professor of International Education & International Affairs at The George Washington University (GWU) and Chair of the UNESCO Chair in International Education for Development. His research interests lie in three areas: policies to improve education in low and middle-income countries; the effects of education on conflict and social cohesion; and predictors of socio-economic gradients.

He holds a master's degree from Florida State University and A PhD Harvard University.

**Monica Winokur**

Member of the Preschool Education Division staff at the Ministry of Education. She is national coordinator of the Ma'agan Program, a systemic multidisciplinary early intervention program implemented in preschool settings across the country for the detection, prevention and referral to treatment of young children with developmental delays and functional difficulties. As part of her activities in the Preschool Education Division, she participates in the development and implementation of programs and tools for preschool teaching staff. She represents the Preschool Division in national committees in a number of topics related to preschool education. During her service in the Ministry of Education she has been a staff member of the Special Education Division as well as of the Learning Disabilities Department of the Psychological and Counseling Services.

Ms. Winokur holds an MSc in Occupational Therapy from the Hebrew University of Jerusalem, an OT diploma and BA in Social Sciences from Haifa University and is licensed in Education.

**Menaheem Yaari**

President (emeritus), the Israel Academy of Sciences and Humanities. Professor emeritus of economics, Hebrew University of Jerusalem. Member of the American Academy of Arts and Sciences, the American Philosophical Association, and the Berlin-Brandenburg Academy of Sciences. Recipient of the Israel Prize in Economics (1987), the Rothschild Prize in the Social Sciences (1994), and the EMET Prize laureate, Social Sciences (Economics) (2012).

Chair of the Initiative's Steering Committee.

### **Yaacov Yablon**

Associate professor in the School of Education at Bar-Ilan University, ; head of the Educational Counseling program and vice-head of the school. He conducted his post-doctoral specialization as a Fulbright Scholar at Harvard University (U.S.). Prof. Yablon studies affective aspects of behavior and learning and his research focuses on the risk behaviors of students in school, on prevention programs and on education towards peace.

He was the coordinator of the Initiative's committee on "From Research to Practice in Early Childhood Education." And a member of the School and Family: Teacher-Parent Relations in a Changing Environment committee.

Prof. Yablon holds a PhD degree in education from Bar-Ilan University, received in 2003.

### **Meirav Zarbib**

Director of the Ministry of Education's Research and Development in Schools and Educational Innovations and Experiments Division. In the past, she administered the open registration pilot program in 35 local authorities throughout the country and in 900 schools that allows parents to choose the local school in which they wish to register their child; she led development processes to create regional school mergers in local authorities and to develop specialized schools. A 16+ year veteran in the education system with experience conducting training in diverse areas and teaching all age groups, from primary school to secondary school. She has also been a pedagogic counselor and a lecturer in the English teaching department and has served in various management positions in the department assessing academic quality, in the R&D department, and the PDS pilot programs.

Ms. Zarbib is an economist, having received her BA degree from Bar-Ilan University in 2000; she is also an organizational advisor, mediator and group facilitator. She holds an MA degree in school leadership from Achva Academic College, received in 2009.

### **Joseph Zeira**

Professor of Economics at the Hebrew University of Jerusalem and at LUISS Guido Carli in Rome., he has been fellow at Harvard University (1984-1985) and MIT (1985). He has been visiting professor at Brown University (1990), Harvard University (1991) and University of Crete (2007). He is research fellow of CEPR and associate editor of Journal of Economic Growth, Macroeconomic Dynamics and Research in Economics. His main research fields are Macroeconomic Theory, Investment and Growth, Macroeconomics and Information, Income Distribution, The Israeli Economy.

Holds a PhD in Economics from the Hebrew University, 1984.

### **Noam Zussman**

Economist, Research Department, Bank of Israel.

## Staff

### **Dr. Avital Darmon, Founding Director**

PhD in biology (1985) and Teacher's Certificate (1988) from the Hebrew University of Jerusalem. Graduate of the Mandel School of Education Leadership (SEL). Biology teacher, Jerusalem. Founder and past director of the National Center for Biology Teachers, under the auspices of the Hebrew University and the Ministry of Education. Past director of the Mandel School for Educational Leadership, Jerusalem. Served as a member of subject and curriculum committees for the Ministry of Education (Biology, Science and Technology) and on committees focusing on teacher-related issues.

### **Oded Busharian, Academic Coordinator**

Completed his BA degree in the combined philosophy, economics and political science program at the Hebrew University of Jerusalem (2007). Holds an MA in political science from the Hebrew University, received in 2011. Thesis topic: A critical examination of the rightist libertarian claim according to which the minimalist state enables the greatest degree of personal freedoms for its inhabitants. He was awarded the Dean's Fellowship and the Rector's Prize for Excellence in MA studies. He served as a research assistant and teaching assistant in the Department of Political Science at the Hebrew University. He formerly served as an analyst and economist for the district marketer of Mifal HaPays (the Lottery) in the Jerusalem area.