

The Main Developments in the Allocation of Resources in Israel's Formal Education System¹

Introduction

Despite the great interest in education system inequality and disparities, the topic of resource allocation and its implications for the gaps that exist in the system has not warranted much attention by the research establishment in Israel.² The objective of this document is to serve as background material for the discussion with our colleagues from abroad on the development of the Ministry of Education's funding formulas³ and budget allocation policy and its implications for the disparities in the distribution of budgetary resources for primary and middle school education.⁴

We will divide this report into several chapters:

Chapter 1 – will describe the development of the Ministry of Education's funding formulas policy over time, in general, and with respect to affirmative action, in particular.

Chapter 2 – will describe the political and professional developments and the struggle surrounding the desire to implement the per-student differential standard.

Chapter 3 – is comprised of the summary and recommendations.

The specific focus on the Ministry of Education's (MOE) resource allocation policy is because the MOE is the most significant partner in allocating resources, in view of the fact that it currently distributes over 90% of the budget earmarked for preschool, primary school and middle school, and approximately 80% of the budget earmarked for secondary education (grades 10-12).⁵ Opinions are divided regarding the regional authorities: there are researchers who believe that they have great influence over the inequitable

¹ This document serves as background material for the discussion at the researchers' seminar to be held in Washington about the literature reviews in the area of "Trends in Investment of Resources in Education by Socioeconomic Status: Public Investment (Governmental and Local), Investment by the Non-Profit Sector and Investment by Households."

² Our discussion deals exclusively with "fiscal-budgetary" resources. It is very important to emphasize that resources exist which are not strictly monetary – and perhaps no less important – that will not be included in the present review. I refer, for example, to the classroom's socioeconomic composition, the "cultural capital" found in the students' homes, society's attitude toward issues of inequality, etc.

³ We use the terms "funding formula" and "allocation method" to describe the system of school budgeting; the former term is more technical, while the latter relates to budgeting policy, in general.

⁴ The complete report, including a similar analysis for preschool and secondary education, and a brief general discussion with which the participants of this seminar are very familiar and therefore is omitted here will be submitted in a different format to the Israeli audience.

⁵ The above-mentioned notwithstanding, it is important to emphasize that even if it is the government that makes the bulk of the investment in the different areas of education – and this differs greatly by age group – still, "marginal" investment by local authorities, households, and nonprofits can have a highly significant effect on the degree of differential resource allocation in the aggregate.

way in which resources are distributed (Ben Bassat & Dahan, 2009; E. Pollack, 2012; M. Justman, 2014 [all in Hebrew]), while there are those who believe otherwise (Blass, Zussman & Tzur, 2010 [in Hebrew]). Another reason for the focus on MOE data is the fact that it is the only organization for which we have generally credible data regarding resource allocation policy. The data for local authorities, households and other entities are partial, haphazard, and not always reliable.⁶ In order not to leave the issue of the other “partners” in the allocation of resources in education untreated, we will mention only the following (about which there is no disagreement among researchers):

- a. Strong local authorities (Tel Aviv, in particular) allocate many resources to education while weak local authorities (mainly Arab authorities) allocate negligible amounts (according to data from various Audits made by the MOE as well as Central Bureau of Statistics data regarding the division of expenditures for education among the different entities, as analyzed by Blass, Zussman & Tzur, 2010 [in Hebrew]).
- b. The allocations made by the local authorities generally express a policy of affirmative action in their fields. Despite this, however, the impact the local authorities have on the allocations can be summarized as contributing to moderately increasing inequality (Blass, Zussman & Tzur, 2015 [in Hebrew]).
- c. The parents’ overall contribution to the total expenditure for education is relatively small although, in light of the fact that financially well-off parents invest more in their children than do disadvantaged parents, the overall effect is regressive (Audits made by the MOE, Blass, Zussman & Tzur, 2010 [in Hebrew]).
- d. The investment of the various nonprofit organizations is relatively not large either, however, its impact generally moderates inequality. This is because most of the nonprofit organizations dedicate a large portion of their budgets to strengthening education among disadvantaged groups (Blass, Zussman & Tzur, 2010 [in Hebrew]).

Ultimately, there is no definitive answer to the question of whether national education resources are allocated in a manner that increases or reduces inequality. We have different pieces of information in different areas, some are more firmly established and some less so, but we are still far from being able to draw a complete picture.

Chapter 1 – Development of the Ministry of Education’s Budgeting Policy with Respect to Reducing Educational-Academic Inequality

⁶ More detailed consideration regarding the quality of the data available and the studies concerning the part these three entities play will be found in the complete Hebrew version.

Any discussion of the issue of inequality in the education system must distinguish between inequality in inputs and inequality in outputs, and answer the question: inequality between whom? Since the topic of the present review is inequality in allocation, we will not deliberate over the definition of inequality in outputs. We will simply state that **inequality in output occurs when the average achievements and the standard deviation of the achievements (without defining which achievements) are not equal for different population groups** (see Adler & Blass, 2008 [in Hebrew]). Inequality in allocation may be divided into two. Formal inequality that occurs when the proportion of resources one population group receives from the general pie is disproportionate to its percentage in the general population, and real inequality that takes place when the proportion of resources one population group receives is insufficient in order to attain equal results (Ibid, 2008).

Now that we have clarified what we are referring to in this discussion of inequality in allocation, the next obvious question asked is, “inequality between whom?” Out in the world, comparisons are customary between rich and poor, periphery and center, etc. Various comparisons are also made in Israel, and we will focus on inequality that stems from the student’s socioeconomic status.

The funding formula in the Preschool education

The funding formula for preschool education in the State of Israel actually has not changed since its establishment. This formula is based on the cost calculation per child in a preschool class: The cost is spread over 33 children in a preschool for 5 year olds located in financially comfortable communities, and calculated for 31 children in a preschool located in areas that are less well-off, resulting in larger budgets for preschools in less affluent areas. The expenditure for kindergarten works out so that the cost of labor (the kindergarten teacher and the aide) is covered by the government while the maintenance costs are covered by the local authority. Until 2012, the cost per child for nursery for 3 to 4 year olds was determined more or less in the same way as for 5 year olds but the financing was covered for the most part through the differential tuition paid by parents, and calculated on a sliding income scale. In the 1980s, it was decided to extend the compulsory education law from age 5 kindergarten to gradually encompass 3 to 4 year olds; gradual and partial steps were taken to exempt disadvantaged populations from partial or full payment.⁷ These steps resulted in a situation in which the weakest section in the

⁷ In Israel, compulsory education starting with 5 year olds was instituted with the state’s establishment while in most communities, nurseries for 3 to 4 year olds also operated. The struggle to extend the law to ages 3 to 4, which means obligating parents to send their children to nursery (an obligation that has not, until now, been enforced) and giving them an exemption from tuition payment was already taking place in the 1980s. However, the decisions that were made on this issue were not implemented and were continually delayed within the

society enjoyed a certain advantage in accessibility to education in the early stages of life, though not in the quality of the service. In 2011, large-scale social-protests took place in Israel which successfully united large groups and focused on different aspects of the cost of living, and especially on the areas of housing and education. As a result of strong public pressure, a committee headed by Prof. M. Trajtenberg was established, one of whose main recommendations was full and immediate implementation of the free compulsory education law for 3 to 4 year olds and full exemption from tuition payment for the entire population.

Primary education

Calculation of the expenses for primary education is also based on employee labor costs – the teaching load, the curriculum, and class size. The **current** basic budgetary unit is the primary school class - with consideration of the number of students in the classroom, plus a few other variables. As we will see below, over the years the funding formulas for primary education have changed a number of times in light of changing perceptions at the Ministry as to the appropriate policy for reducing gaps.

Middle school

Over the years, budgeting for middle school has also undergone a number of changes. Until 1993, it was very similar to the allocation method for primary education and affirmative action policy reflected in the “nurture basket” (see explanation below).⁸ In 1994, a new allocation method called the “per-student differential standard” was established that was basically a funding method based on a weighted student formula that provided extra funding for students from low socioeconomic backgrounds, and which was eventually adopted also for primary education for a short period of time.⁹ This change lasted only one year and was followed by another funding formula – later adopted for primary education – called the “combined standard per student,” which actually is, in contrast to the weighted student formula, a funding formula based on the class as basic unit rather than the individual student, with some consideration-compensation made for the number of students and socioeconomic composition.

framework of budget discussions and it was only in the 1990s that the law for socioeconomically disadvantaged communities was gradually implemented.

⁸ The terms "nurture basket" and "nurture index" are literal translations that hardly convey the meaning of the Hebrew phrase that describes a state of a need and help caused by harsh socio-economic circumstances.

⁹ The author of these lines formulated this method in response to a request by Dr. S. Shoshani, then the MOE's director general.

Secondary education

For secondary school, the main funding formula has not changed at all during the past 20 years. Funding is provided by means of “tuition”¹⁰ per student, and is established using the same elements that determined budgeting during the previous stages of education, although the following are also taken into consideration: the study track (academic vs. technological), the area of study (different specialties in technology education), grade level, teacher profile at the institution in question (average seniority and education level), and the level of service provided by the school. The changes that did take place throughout the years were related only to the “coefficients” of the components involved in the calculation and not to the method of calculation itself. These included, for example, a change in class size as a component in allocation, change in the number of required hours, etc.

Development of the “Nurture Index”¹¹

Since the 1960s, the Nurture Index has been used by the Ministry of Education as the main instrument to rank schools and/or students according to their (“objective”) ability to attain academic and educational achievements. We can point to five different nurture indices used over the years. The transition from one index to the next is not accidental and pertains to changes in how the education system views and identifies populations in need of affirmative action. It also reflects how it relates to the characterization of these population, to the index components’ unit of measurement (the individual student or the school), and to the attempt to adapt the index to social and demographic developments.

Defining the student populations in need of nurturing and the Nurture Index in Israel

As mentioned, the Nurture Index is a tool which serves the Ministry of Education in Israel for defining populations that deserve and need affirmative action. Some types of populations are typically viewed as “natural” candidates for affirmative action:

1. The population of students from low socioeconomic (SES) backgrounds
2. The population of students from a cultural-environmental background that differs from the majority (in Israel, these are mainly Arabs, ultra-Orthodox, and foreign workers)
3. Students with low academic achievements

¹⁰ The term “tuition” was put in quotes due to the fact that, theoretically, it is entirely paid for by the state. Parental participation in funding secondary education is carried out in the framework of “voluntary” parental payments, individually determined by each institution, and whose regulation by the state is only partial and not always effective.

¹¹ For greater information on the development of the Nurture Index, see Blass (2009, 2010) (in Hebrew).

4. Students with special needs that are either physical or mental

The objective of the Nurture Index in Israel has **always** been to serve as a tool for measuring the extent of the relative need and thus to help determine the level of assistance and preference given to low SES students – whether they are high achievers or low achievers. This is due to the assumption that low SES is the main cause for preventing students from reaching their academic and social potential (Elgrabli, 1975; Adar, 1978; Blass, 1980; Kahan, 1985a; Kahan, 1985b; Yair, 1991; Neshet, 1996; Levi, 1999 [all references in Hebrew]).

In Israel, the following three criteria are used to determine whether a population deserves affirmative action:

1. A population residing in an area defined, according to socioeconomic criteria, as a development area.
2. A population defined, according to socioeconomic criteria, as a disadvantaged population (not necessarily living in a development area).
3. A population defined by a certain and specific type of distress such as: a population that has dropped out or has the potential of dropping out of school, an at-risk population, etc.¹²

The first Nurture Index (1963-1973)¹³

This index was mainly an index of schools (assigning a score to each school, not to each student) and relied upon fourth grade outcomes in Hebrew and arithmetic at the beginning stage, and later, on the achievement levels in a test administered in the eighth grades over two consecutive years, on the percentage of new immigrants, the percentage of fathers of Asian and African origin, the principal's seniority and training, the percentage of teachers without certification, the percentage of teachers who did not live in the area where they worked. The variables whose omission was most glaring were parental income and education. Glaring too is the fact that this index did not relate at all to Arab or ultra-Orthodox students.

The "Elgrabli Index"¹⁴ (1974-1993)

This index determined the nurture level using the following variables: father's education, father's origin, and the number of children in the family. As time passed, this index, which was very effective from an

¹² Education and Welfare Services Division, 1997 work plan (in Hebrew).

¹³ The Nurture Index's various components and their weights are detailed in the appendix.

¹⁴ Thus called, after Mr. M. Elgrabli, of the MOE's Planning division, who formulated this index.

administrative standpoint, warranted much criticism due to the fact that the proportion of students whose parents were born abroad was rapidly decreasing and thus, the variable of father's origin as predictive of achievement was losing its value. This index, too, did not relate to family income and was not applied at all to the Arab and ultra-Orthodox populations.

The “Nesher Index”¹⁵ (1994-2004)

As a result of criticism over the Elgrabli Index, in 1989, a committee was established to examine all the issues related to the Nurture Index. In light of the committee's recommendations, a new Nurture Index was created which underwent an initial pilot phase in Jewish sector primary schools and was later expanded to include middle schools, and Arab sector schools.¹⁶ The index's components were: the proportion of low-income families, proportion of parents with low educational levels, family size, proportion of new immigrants, and degree of periphery-center distance.¹⁷ The following variables were added with respect to the Arab population: “non-recognized communities” (for example, Bedouin settlements that the state did not officially recognize but included many residents of the “diaspora communities”), mixed cities such as Acre and Ramle, etc., and small communities. As is apparent, the main innovation of this index was the inclusion of Arab students. However, the establishment of a separate index for the Arab population was accompanied by the decision that the allocation of resources for affirmative action to the Arab population would reflect their relative proportion of the population. As the Arab population generally has a much lower SES level than the Jewish population, this decision was discriminatory.

The “Shoshani Index” (2004-2008)¹⁸

The Shoshani Committee was established by the education minister Limor Livnat, following a request to the High Court of Justice opposing the budget allocation policy for primary education which had led to

¹⁵ The “Nesher Index” derives its name from the MOE's chief scientist at the time, Prof. Perla Nesher.

¹⁶ See, Nesher (1996).

¹⁷ A weight of two-thirds was assigned to the locality's minimum distance from the three large cities (Jerusalem, Tel Aviv, and Haifa) and a weight of one-third was given to the size of the population in the natural geographic region. The reason for adding the component of distance from the center to the Nurture Index is that by virtue of the fact of living in the periphery, their playing field is not level with that of the country's center (for example, due to a limited range of services).

¹⁸ The year 2008 refers to the academic year of 2007-8.

some “recognized, non-official schools”¹⁹ being under-funded, as compared to ultra-Orthodox schools. The Nurture Index proposed by the Shoshani Committee differed in principle from the Nesher Index on several points. First, the index related to the individual student and not to the school. Second, it related to all students while the earlier indices did not relate whatsoever to ultra-Orthodox students. The index included variables from previous indices: father’s education, number of children in the family, distance from the center, and country of origin, as well as components not previously included: mother’s education, communities designated as “national priority,” and immigrants from impoverished countries.²⁰ In determining the different weights assigned to each component in the index, attention was also paid to how the budget was expected to be distributed among the various population sectors. Due to the difficulty in obtaining income data for the student’s family, the committee decided to abandon the income variable.

The “Strauss Index” (2008-present)

The public criticism, and mainly the High Court’s deliberations in case 11163/03 concerning the discrimination inherent in the determination of national priority areas,²¹ led to the MOE being forced to formulate a new nurture index, the “Strauss Index,” that would not include national priority areas among its components. The Strauss Index’s calculations are fundamentally similar to the Shoshani Index’s methods with the difference between the two being the components of the different indices and their weights. The Strauss Index includes only four components: the educational level of the more educated parent, income,²² periphery-center distance, and immigrant status (up to 10 years prior to the start of studies). The components removed from the index were family size, emigration from an impoverished country and residence in a national priority area. Undeniably, the new Nurture Index, which went into effect in the 2008 academic year, reflects more accurately educationally deprived situation than the previous index because it relies on components that have a stronger relationship with educational deficiencies and they relate to the entire population of students.²³

¹⁹ This is the legal definition of schools that are not run by the state or by the local authority.

²⁰ This was patently a political decision which ultimately led to the need for a fundamental change to the index.

²¹ This High Court case was not brought against the Ministry of Education but rather against the government’s policy that granted budgetary and other preference to communities located in “national priority” areas, while the criteria for inclusion in the list of national priority areas were such that the overwhelming majority of them were Jewish (of the roughly 500 communities, only a few were Arab).

²² The income component relates to the average income of the parents of the school’s students’ and this data is obtained from the tax authorities.

²³ In this context, it should be mentioned that a more reliable nurture index does not necessarily guarantee more progressive allocation. The Nurture Index is only a tool for ranking the students according to the level of difficulty they may have – in light of their socioeconomic background data – in succeeding academically. It can also certainly serve regressive policy if, for example, it is decided to allocate greater resources to students of advantaged SES groups with the claim that they “would be able to use them to better advantage.”

Summary

During a period in which relatively little change was made to the education system's method of allocation, developments in the Nurture Index since 1963, and especially since the mid-1990s, were much more rapid and were characterized by two main trends. The first trend was extending the application of affirmative action from state-secular and state-religious education to the inclusion of Arab sector education and eventually, to the inclusion of ultra-Orthodox education. The second trend was the increase in equality between different population groups, with index components becoming more and more equitable and no outright preference shown for any particular sector of the population. The changes in the Nurture Index contributed to the enhancement of its credibility and its ability to serve as an effective tool in striving to reduce gaps. In contrast, the most recent changes in the funding formula for primary and middle school education, which are essentially a retreat from the per-student differential standard to a standard based on allocation per class, have clear regressive tendencies, as demonstrated by the latest MOE publications (Ministry of Education, 2015; Blass, Zussman & Tzur, 2010 [both in Hebrew]).

Chapter 2 – The Per-Student Differential Standard in Primary and Middle School Education – The Struggle Continues

By the late 1950s, there was already a firm recognition among the educational leadership that wide disparities existed between the achievements of different population groups in Israel's education system, and this brought about a complete series of steps designed to reduce these gaps. The main steps for meeting this objective were: founding comprehensive schools, expanding technological education, the broad educational reform that led to the establishment of middle schools, and allocating additional funding (mainly through teaching hours) with the institution of the "nurture basket" budgeted for schools using the Nurture Index.

Among the most prominent steps taken in this context we can mention two attempts to introduce a new allocation method whose essence was to give much consideration to the student's socioeconomic status. The first attempt was in middle schools in 1994, and the second in primary schools from 2004 to 2008, following the Shoshani Committee recommendations. Despite the basic similarity between these recommendations and the allocation method attempted for middle schools, there are two differences in their operating conditions that contributed to this method running for a longer period in primary education than in middle school. The first difference was that additional funding for another 80,000 hours in primary education was guaranteed.²⁴ The second difference was its adoption by the education minister at the time and the establishment of an intra-office administration with wide authority to institute the change in allocation method. Although these two differences created more positive conditions for putting the new allocation method into effect, they were insufficient in order to overcome the opposition of various parties to the method and it was cancelled after a relatively short period. This, in spite of the differential standard having led to significant achievements in increasing progressive allocation and reducing inequality in resource allocation to the various sectors.

What forces were at work, and who stood behind them? The subject has not yet been fully investigated.²⁵ Nonetheless, closer examination of the three above-mentioned main allocation methods for primary and

²⁴ The term "weekly hours" is one with budgetary, not educational, implications, and expresses the average annual cost of an hour of the teacher's work (with the teacher's position being defined as the number of work hours he must teach during the week). The advisors demanded an addition of 120,000 hours so that there would be no need for schools to reduce hours and the reference was mainly to state-religious schools and some state-secular schools in the Jewish sector which had relatively small class sizes (mostly in the periphery and in regional councils). Although the additional hours were authorized, ultimately, they were not provided in full.

²⁵ A number of studies have been written which describe the history of the per-student differential standard, the attempts to implement it and the reasons for its abandonment. The most recent is an article by Blass and Kraus in a report prepared for the Van Leer Institute for the Israel Democracy Institute conference held lately in Haifa (Blass & Kraus, 2014 [in Hebrew]).

middle school education immediately and plainly reveals the populations that derive the most benefit from each one of the methods.

The per-classroom standard + “various baskets”: According to this method, in use for middle school until 1994 and for primary education until 2004, the main budget was allocated equally to all schools through a basic standard per classroom intended to enable the basic curriculum to be put into effect. Various additions were made to this standard whose aims were to provide a solution to unique problems of the school, or to promote topics the state was interested in helping advance. From the administrative perspective this method was very convenient for operational purposes - it was easy to explain to the community of users and contained foundations of basic justice and equality that prevented discrimination against schools serving populations that were small (owing to their location or worldview). It also enabled specific topics to be encouraged and incentivized with relative ease. At the same time, it created a clear preference for small schools or for schools that had small classes for other reasons (for example, separation of girls and boys). It also provided “latitude” for making decisions based on ideological and political motives by those who headed the system, and enabled them to give preference to schools and populations they wished to favor. While some of the small schools were in the periphery and served low SES populations, most of them were in the state-secular system affiliated with agricultural communities such as kibbutzim and cooperative settlements, and state-religious schools.²⁶ The multiplicity of “baskets,” some of which were distributed under vague criteria, also created an unjust distribution of funding – schools headed by “entrepreneurial” principals (which also generally serve advantaged populations) succeeded in recruiting greater resources than other schools. And ultimately, since allocation was determined by a normative classroom²⁷ (20 to 40 students) regardless of size, a common incentive was born for parents, teachers, and local authority members to create circumstances that required splitting classes and thus earning the school additional funding. This option was used, first and foremost, by advantaged populations that better knew how to take advantage of the system’s various options.

The “combined standard” approach: According to the combined standard, used for middle schools since 1995 and for primary schools since 2008, the budget allocated to each class is comprised of two parts:

²⁶ In religious education, there were many small classes because they comprised a minority in many communities and due to the tendency to separate classes by gender. In agricultural communities, most of the small classes were due to demographic distribution (similar to rural areas in most countries around the world).

²⁷ A “normative classroom” is an administrative budgetary term related to budget per class and defines the number of classes the MOE will fund in line with the number of students in the grade. Since the maximum size per class is 40 and the minimum is 20 (for classes with less than 20 students, the school receives half the standard number of hours per class), if a grade has 120 students, the school will be budgeted for three classes in the grade, but if they have 121 students, it will receive funding for four classes.

- The first and main part is the basic standard which, similar to the previous method, is provided uniformly and equally to each classroom.
- The second part is comprised of two key supplements:²⁸
 - A supplement derived from class size but with no consideration of the students' SES backgrounds (that is, for every student beyond the 20th student in the class, the school receives additional funding regardless of whether the school serves students from disadvantaged or advantaged backgrounds).
 - A supplement derived from the SES composition of the students attending the school.

The results of this allocation method depend on the ratio between the first part (the basic standard) and the second, additional, part, as well as the relationship between the two supplements (the one that depends on class size and the one that accounts for SES composition). Since 2009, in Israel, the first part represents, in practice, over 70% of the total number of hours. As a result, this method serves mostly small schools (religious schools and those located in regional councils, similar to what was described with respect to the previous method). The supplement derived from the number of students in the classroom, which can reach a maximum of 20% of the hours budgeted, works in favor of crowded classrooms (secular schools in large cities and the Arab sector), while the supplement derived from the SES makeup of the students works in favor of the Arab and ultra-Orthodox populations. The great advantage of this method over the previous one is in its amalgamation of all the supplementary budgetary possibilities – which increases budgetary transparency, and in its provision of substantial compensation to crowded classrooms. Its great disadvantage is that when the amount in the entire budget dedicated to affirmative action is small, it cannot provide real affirmative action.

The per-student differential standard: As mentioned, this standard was tried for only one year (1994) for middle schools and four years (2004-2007) for primary schools. According to this method, the funding formula takes only two pieces of data into account: the number of students in the school (and not in each specific class) and the students' socioeconomic background.²⁹ The great beneficiaries of this method are the large schools whose students include those from disadvantaged populations. In the Israeli reality of the last 20 years, this means mostly schools in the Arab sector and **some** in the ultra-Orthodox sector.³⁰

²⁸ The two other additions are for a long school day in schools included within this framework and for prayer hours in religious schools.

²⁹ In order to avoid a situation in which schools would not be able to teach the curriculum due to a small number of students, a "safety net" was created for schools using a formula that included a multiple of the minimum number of hours per class multiplied by the number of classes in the school.

³⁰ Ultra-Orthodox schools also benefitted from the transition to this allocation method since for the first time, budgeting rules identical to those applied for state-secular and state-religious schools were applicable to them too (at least for "independent education" and for the "Maayan HaTorah Education" network), and owing to the fact

The big losers may be small state-religious schools and/or those that wished to split their classes by gender, and all small schools with students from advantaged backgrounds. Most schools were in the middle. Some were small and disadvantaged and so the loss tied to size was compensated for by the supplement provided for SES background data, or they were large and advantaged and so the benefit stemming from size was offset by the loss due to SES background data.

Even prior to this funding formula's implementation, it was subject to criticism from various public entities: officials associated with state-religious education argued that it would cause the state-religious education system, which has small classes, a loss.³¹ In contrast, those on the left side of the social map pointed to the discrimination inherent in the new Nurture Index owing to the great weight it gave to components of national priority and immigration – indices that are not relevant to the Arab population in Israel.³²

The most scathing criticism was included in a document prepared by Kahn (2004 [in Hebrew]). According to him, the model formulated by the Shoshani Committee created the impression that **all** of the hours allocated by the standard and used for the primary education system were differentially-based on the student's degree of eligibility. This impression was misleading since the additional allocation per student ranged only between no additional allocation to pupils from strong socio economic background to 60% to students from the weakest socio economic background. Thus – since the lowest budget per student was 1.25 teaching hours, and the highest 2 hours, most of the budget was distributed in an equal manner and only a small portion in a differential manner.³³

Despite, and as opposed to, the criticism lobbed against the differential standard prior to its implementation, research that examined its results found that it led to a significant reduction in funding gaps among the various parts of the educational system. A study conducted at the behest of the Movement for Quality Government in Israel (Blass, 2007 [in Hebrew]), and which checked the results of the new allocation method during its first two years of operation (2004-2005), found, in part, that:

1. Implementation of the Shoshani Report brought about an increase in equality in the Jewish sector.

that for the first time the Nurture Index was also applied to them, and since their population of students come from low SES backgrounds, they were able to reap the benefits of a higher allocation standard per student.

³¹ On Aug. 27, 2002, the chair of the Knesset Education Committee, MK Zevulun Orlev, was quoted by Channel 7 as saying, "The National Religious Party rejects the report, whose implementation will lead to a reduction of 20,000 teaching hours from the religious-Zionist education system, estimated at roughly 100 million shekels."

³² See, for example, the remarks of MK Y. Tamir in the Knesset's Education Committee on June 19, 2003 (in Hebrew): "I think that the Shoshani Report does tremendous injustice to the Arabs because the Nurture Index gives great weight to immigration. Up to 40% is robbed from the Arabs because of the lack of indices for which they are eligible... It is impossible to accept the Shoshani Report as is because of the Nurture Index."

³³ Religious student were given a uniform addition of 0.2 extra hours for the purpose of prayers

2. The scope of hours allocated to the Arab sector, and mainly to the Bedouin sector, grew significantly.
3. The result of an increase in equality was achieved mainly through a decrease in the number of hours allocated to the Jewish sector and an increase in the allocation of hours to the Arab sector.

A subsequent study also found that the gap in resources between various population groups in primary education were reduced to some extent.³⁴ Were this method not halted in 2008 (before it was fully realized), the reduction in gaps would have been more significant. This study also found that due to a small increase in parental, and other funding partners state-religious education, this sector was not harmed – that is, the number of weekly hours per class did not decrease as a result of the transition to the per-student differential standard (this obviously does not mean that individual schools were not harmed).³⁵

Both the studies clearly indicated the success of the **per-student differential standard** funding formula in fulfilling the MOE's affirmative action policy which claimed, over the years, that it strives to achieve the goal of reducing gaps in allocation between the various segments in the Israeli educational system, and the creation of a situation in which schools that serve disadvantaged student populations enjoy higher budgets than schools serving advantaged populations. These findings reinforce the impression that what led to the shelving of the differential allocation method was the political ability and strength of interest groups in translating their unfounded sense that their circumstances were becoming absolutely and relatively worsened into effective political pressure. In 2015, the Ministry of Education published data regarding resource allocation in the education system for 2012 (four years after the transition to the combined standard). Those data indicate that the situation in 2012 had changed for the worse from the situation in 2008.³⁶ In view of the fact that the only significant change that took place during this period of time was the transition from one allocation method to another, it is not unreasonable to assume that the reason for the deterioration is rooted in this transition.

If we are to respond to the question of which of the allocation methods discussed is to be preferred as an instrument of equitable distribution and reduction of gaps in budget allocation when such gaps exist, the answer depends on the weight of the hours allotted to affirmative action (“nurture basket”) within the entirety of budgetary resources allocated to the school. In the “per-class basic standard,” the scope of

³⁴ Blass, N., Zussman, N., & Tzur, S. (December 2010). The Allocation of Teachers' Working Hours in Primary Education, 2001–09. Series of Articles for Discussion 2010.18. Bank of Israel (in Hebrew).

³⁵ The main improvement was in the significant number of hours added in the Arab sector, and especially in the Bedouin sector. Beyond this, another central finding was that in contrast to the warnings issued by opponents of the change, the scope of teaching hours in state-secular and state-religious education were only very minimally affected.

³⁶ The MOE's press release and publication of data on budget transparency, January 2015, retrieved from: <http://meyda.education.gov.il/files/MinhalCalcala/shkifut.pdf>

teaching hours allotted using socioeconomic criteria reached somewhere between 12% and 15%. In the two-stage, combined method, it is 5% to 7%. In the “per-student differential” method (**were it fully implemented**), it would be 26%. The conclusion in the current reality is, therefore, unequivocal: **the per-student differential standard is the most effective method for reducing inequality.**³⁷

To sum up, it is clear that the main “weakness” of the per-student differential standard, as compared to the other two methods, is that the main beneficiaries of the method were intended to be students in the Arab and ultra-Orthodox sectors. As we all know, the Arab population’s political clout is negligible. In contrast, while the ultra-Orthodox population has great political power in certain situations, it lacks public and media support. There is also another important element that should be added - which, both openly and behind the scenes, opposed the change to the new differential funding method: some Ministry of Education officials, part of whose power relies on their control of non-transparent budgetary resources. These people feared losing their power, or having it limited as a result of the adoption of an open and transparent method of funding that enables principals of educational institutions, and any other interested party, to know exactly the amount of the budget available to him, and thus, to a great extent, reduces the “freedom of action and preference” they have in their hands. As we have seen, the two attempts to significantly reduce inequality through the per-student differential standard were cancelled before reaching a stage of full implementation and maturity, yet ideas which are grounded and deeply rooted in reality do not disappear. In 2013, a new government was elected and a new education minister, Rabbi Shai Piron, was appointed.³⁸ Immediately upon his appointment, a committee was selected that was meant to formulate a proposal for renewed adoption of the per-student differential standard. The committee worked for more than a year and its final report related to primary and middle school education, to teaching hours alone, left the combined standard in place, and added just 150,000 hours (half of this from the Ministry’s budget). In light of the above, it can be said that the committee’s recommendations followed by the education minister’s decisions constituted a disappointment to anyone who expected news of a return to the per-student differential standard, and its expansion to additional education stages and areas of expenditure.

In conclusion, the Israeli experience³⁹ teaches that significant budgetary reforms, whose objective is the increase of equality, are possible from a political perspective only when they warrant the support of more

³⁷ It is only fair to emphasize that the author of these lines, whose stand is clearly in favor of the differential standard, was involved in creating both the methods.

³⁸ Shai Piron was also a member of the Dovrat Committee and as executive director of the “It’s All Education” movement, waged a public battle to have the per-student differential standard instituted in each education system, from preschool through secondary school.

³⁹ Additional examples in Israel from recent years are the implementation of the Compulsory Education Law ensuring free education for 3-4 year olds, the demand to add an aide to 3-4 year olds nurseries, the attempt to

established groups (mainly the middle class and the upper middle class). It would be very difficult or nearly impossible to implement reforms perceived by advantaged groups as reducing their relative advantage and all the more so, those that reduce the resources at their disposal. In light of the above, it is clear that massive transfer of resources between the different sectors of Israeli society, and especially from the Jewish to the Arab sector, can be expected to encounter opposition.

Chapter 3 – Summary

This document briefly described the development of the Ministry of Education's budgetary policy, the Nurture Index — the key tool serving policy for affirmative action purposes, and manifestation of this policy on the ground; a specific case was described here – the case of implementation of the method using the per-student differential standard.

The description clearly reveals the strong connection between apparently neutral administrative decisions and the social and political reality that exists in this country. This relationship is not unique to Israel. The struggle over budgetary and other resources is at the core of political power struggles in every society and in this struggle, the power of groups that are at a socioeconomic disadvantage or scorned due to their ethnicity or ideology, is generally weaker than groups with a hegemonic tradition. However, despite this universal truth, there are cases where weaker groups' interests prevail and decisions are made to implement policy that acts to reduce the advantages enjoyed by the ruling groups in society. The question of when are conditions created that enable policy to reduce disparities is a complex question that, within the framework of this paper, cannot be addressed in depth. However, the test case we presented as well as other events to be described in an expanded version of this paper (implementation of the Compulsory Education Law for 3-4 year olds, and the development of technological education in secondary school) suggest several directions for thought.

1. The policy of improving the level of service (both in scope and quality) is not the same as reducing gaps and advancing equality. As long as improving service is uniform for the entire population, inequality will continue to exist.
2. Politically, it is much easier to promote a policy of improved service across the board than a policy of reducing disparities.
3. The policy of universal provision of services which has clear regressive features can be progressive when the gap between the current situation and the expected situation is greater among disadvantaged groups.

reduce classroom crowding; without going into detail, we will simply say that the role the middle classes played in all these processes was definitive. International experience also teaches that budgetary reforms designed to advance equality and reduce disparities were almost always accompanied by significant additions to the budget.

4. Reform which includes universal service in a place where there was previously significant affirmative action (as was the case with implementation of the Compulsory Education Law for ages 3-4) is patently regressive.
5. Despite the above, implementation of steps intended to reduce inequality in the longer term requires creation of a political-social coalition of the weakest groups together with the strongest groups (the “middle classes”). When such alliances are made, or when stronger groups lead the struggle, the chances for implementation are better (see the case of application of the Compulsory Education Law to 3-4 year olds, the addition of a second aide in crowded preschool classrooms, and reduction of class sizes). In contrast, when unions between weaker and stronger groups are not made, the fight for reducing gaps comes up against difficulties and suffers failures (see the case of the per-student differential standard).
6. One of the conclusions emerging from all of the above is that it is easier to promote equality and reduction of gaps when the relative advantage of the advantaged groups shrinks rather than when there is a need to transfer resources from the advantaged to the disadvantaged group. Therefore, an almost necessary condition for carrying out reform designed to advance equality in the system is to guarantee additional funding that will prevent the need to reduce the scope of resources advantaged groups already enjoy.
7. In a society in which equality is not a self-evident value but rather a value of secondary importance whose advancement is justified with functional reasons (“inequality harms the economy...social cohesion... strength of security”), research pointing to the damage caused by inequitable situations can make a strategic contribution. It is therefore important for those who want to reduce gaps to reinforce and promote steps that contribute to improving the available data about the education system, about the relationships between student data, the institutions they attend, and the teachers who teach them. It is of particular importance that these data be transparent and accessible to the public, in general and to the community of researchers, in particular. It is superfluous to mention that this is not the case in Israel.

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Table 1: Comparison of Nurture Index Components and their Different Weights According to the “Nesher Index,” the “Shoshani Index,” and the “Strauss Index”

Nesher Index				Shoshani Index		Strauss Index	
	Jews ¹	Arabs & Bedouin ¹	Druze	All Students			
Percentage of low income families ²	25	25	25			Family income – Per capita decile	20
Percentage of fathers with low education ³	25	25	25	Father’s education ⁹	15		40 (the parent with the higher level)
				Mother’s education ⁹	15		
Percentage of large families ⁴	15	12.5	12.5	Number of siblings ¹⁰	10		
Percentage of new immigrants ⁵	15			Immigrant status (past 10 years)	20		20
				Immigrant – from impoverished country ¹¹	10		
Periphery-center distance ⁶	20			Distance from the center of country ¹²	10		20
Small locality ⁷		12.5	37.5				
				Residence in National Priority Area A or in a conflict zone	20		
Percentage of students from non-recognized communities		12.5					
Mixed city ⁸		12.5					

Source: Blass, Zussman & Tzur (2010) (in Hebrew)

Table notes:

(1) Students in official schools (except those that are self-managed) as well as the ultra-Orthodox networks, independent education, and Maayan HaTorah Education.

- (2) Annual per capita income up to 15,000 NIS. Family income includes the parents' before-tax income from salaried and freelance work, as well as child subsidies, birth grant, reserve duty pay, unemployment, and worker's compensation.
- (3) The father's education - up to nine years of schooling.
- (4) The number of the mother's children: Jews – 5, Non-Jews – 6.
- (5) Immigrant status for up to 10 years prior to the start of the school year (for the 2002 school year, this refers to immigrants from 1992 and later).
- (6) The distance between the natural geographic region in which the school is located and the closest of the three large cities (Jerusalem, Tel Aviv, and Haifa).
- (7) The number of residents does not exceed 2,000 in the locality in which the school is located.
- (8) The city in which the school is located.
- (9) Number of years of study. A continuous variable of up to 20 years of study with two year increments.
- (10) Number of siblings - born to the mother.
- (11) For immigrants during the last 10 years.
- (12) An adjusted calculation of the minimum distance of the locality from the three large cities (Jerusalem, Tel Aviv, and Haifa) given a weight of two-thirds, and the population size in the natural geographic region is assigned a weight of one-third.