



Report of the State Comptroller of Israel | May

Ministry of Education

---

# **Differential Budgeting as a Tool for Minimizing Gaps in the Education System**





## Differential Budgeting as a Tool for Minimizing Gaps in the Education System

### Background

For many years, the education system in Israel has been characterized by considerable gaps between students of all age groups, mostly between high socio-economic and low socio-economic students, between Jewish and Arab students, and between students who study in the state education school system and state-religious education school system and those who study in ultra-orthodox institutions. There are gaps in the resources that the Ministry of Education, the local authorities, and the households provide to the students and in the students' academic achievements. These gaps severely and continually impair the development and progress of low socio-economic students and the state's economic growth, making it more difficult to solve social problems and distress.

During the 1960s, the Ministry of Education contended with the education system gaps through differential allocation of public resources to students based on socio-economic classification. The differential components of the Ministry of Education's resource allocation have been consolidated over the years in elementary and junior-high schools to minimize gaps in the education system. In 2014, a new differential budgeting model was developed for elementary and junior-high education, and it has been applied since September 2014 until this very day.

Differential budgeting aims to advance students from low socio-economic backgrounds and bridge the budgetary gap created as their families and local authorities of low socio-economic status allocate less resources to these students.

The differential budgeting model is based on the Ministry of Education's policy and plan to minimize gaps and to advance equality in the education system through additional study hours (cultivation hours) to the basic standard hours (allocated equally to all schools according to binding regulations). The addition is differential and granted to elementary and junior high schools according to the students' socio-economic status at each school.



Key Figures

**NIS 1.09 billion**

the budgetary cost of the cultivation hours allocated to elementary education in the 2021–2022 school year (from September 2021 to August 2022), as opposed to NIS 10.67 billion – the overall cost of the total hours allocated to elementary education in that year

**15%–19%  
20%–30%**

PISA tests' achievement gaps between students from high socio-economic backgrounds and students from low socio-economic backgrounds and between Jewish and Arab students, respectively

**16%  
and 19%**

budget gaps per student from the lowest cultivation quintile in the elementary and junior-high education between Jewish and Arab students, respectively

**15%  
and 30%**

the average budgetary gaps in elementary education between a Jewish student in the state education school system and the state-religious education school system with a student in an ultra-orthodox institution, respectively

**10.2%**

cultivation rate hours out of the total standard hours allocated to elementary education in the 2021–2022 school year

**NIS 3,400**

the gap in the average budget per student across all education phases, between local authorities from high socio-economic clusters (9–10) and local authorities from low socio-economic clusters (1–2)

**NIS 13.8 billion**


national expenditure on education from private sources in 2021

**59%**

the rate of elementary schools and junior high schools (423 out of 711 schools) in the lowest cultivation quintile that did not take part in the Marom Program<sup>1</sup>, which cost between September 2015 to August 2022 at about NIS 140 million

1 Prior to the implementation of the differential budgeting model, the Ministry of Education devised a complementary plan for students who study at schools that need cultivation, alongside allocation of additional resources to these schools as part of differential budgeting.


## Audit Actions

 From February 2022 to August 2022, the State Comptroller Office audited the Ministry of Education's differential budgeting since the 2014–2015 school year to minimize gaps in the education system. The audit included the schools' budget sources and their transparency, set in the government resolution from 2013; the budget gaps of educational institutions with different socio-economic students and different sectors and the gaps between the student's academic achievements; the "gap minimizing and equality advancement program," formation, assessment and impact, based on the differential budgeting model for elementary and junior-high education since 2014; the quality of teachers and its effect on the utilization of the resources for gap minimization; and the implementation of the Marom Program that supports schools in low socio-economic backgrounds and which complements the differential allocation of resources to these schools.

The examination was conducted at the Economics & Budgets Administration, Tel-Aviv District, Southern District, Haifa District of the Ministry of Education, and several elementary and junior high schools. Supplementary examination was conducted at the Local Government Audit Division of the Ministry of Interior.

---

## Key Findings

 **The Impact of the Budget Minimizing Plan on Budget Distribution in Elementary Education** – from September 2014 to August 2021, the number of students in elementary education increased from about 963,000 to about 1.09 million (13% increase), the rate of standard hours increased between 2014–2015 school year and 2021–2022 school year was about 14% (from 1.21 to 1.38 million hours) and the rate of cultivation hours allocated out of them increased from about 6% to about 10% (from 69,000 to 141,000 hours). Following the complete implementation of the gap-minimizing plan, the gap in elementary education in the 2019–2020 school year was about NIS 5,320 in favor of students from the low cultivation quintile who need the most significant level of cultivation (the budget for such a student was about NIS 19,650), compared to students from the highest cultivation quintile who need less cultivation (the budget for such a student was NIS 14,330). However, about 80% of that gap (NIS 3,740) had been reached before implementing the gap-minimizing plan. Thus, the plan's impact on increasing the gap in favor of students from the low cultivation quintile was relatively minor – it increased it only by 25% (about NIS 1,580). It is doubtful that the above increase is sufficient to substantially minimize educational gaps between students from the lowest and highest cultivation quintiles.



**📌 Gaps in Standard Hours Allocation and Ministry of Education's Budget** – the rate of cultivation hours allocated in the 2021–2022 school year for elementary and junior high schools' education out of the total number of standard hours was about 12% (222,700 cultivation hours out of 1.86 million standard hours). Standard hours and budget for elementary and junior high education in the 2019–2020 school year were allocated progressively amongst the quintiles. As for standard hours per class (which include basic standard hours and additional standard hours), 36 hours per class were allocated in elementary education for the highest cultivation quintile and 44 hours per class for the low cultivation quintile; in junior high, 46 hours per class were allocated for the highest cultivation quintile and 53 hours per class were allocated for the low cultivation quintile. Nevertheless, there are gaps between the Jewish and the Arab sector – in favor of the Jewish sector at the level of basic budgeting for each of the quintiles and it increased due to the additional hours from 5%–11% (1.7–3.7 standard hours per class) to 8%–12% (2.9–5.1 standard hours per class) in elementary education, and from 5%–6% (1.8–2 standard hours per class) to 8%–20% (3.6–10.4 standard hours per class) in junior high. The lower the quintile, the higher the inter-sectoral gap. As for the Jewish sector, the average budget per student in the state education school system and state-religious education school system in the 2019–2020 school year was about NIS 15,940 and NIS 17,950, respectively, compared to NIS 13,810 per student in ultra-orthodox institutions (ultra-orthodox educational networks) – a gap of 15% and 30%, respectively.

**📌 The Characteristics of Gap Minimizing and Advancement of Equality in the Education System's Plan** – the gap minimizing plan from 2014 intended to lead a multi-annual strategic process of gap minimization in the education system through a substantial change in the budgeting model and, as a complementary move – development of a multi-annual plan intended to provide pedagogical and organizational support to low socio-economic schools. Despite the designated plan included in the inter-ministerial team's report from 2014, the Ministry of Education has not defined clear and measurable objectives for minimizing academic achievements and additional pedagogical variables gaps between educational institutions requiring different cultivation levels. In addition, it has not formed appropriate output and outcome metrics, enabling it to examine progress over time and assess the model's effectiveness. Moreover, for necessary updates, it has not formed or operated a mechanism for multi-annual tracking and monitoring of the plan's implementation and impact. Furthermore, the Ministry of Education has not defined an integrative entity to implement the gap-minimizing plan, examine its impact, and conduct necessary changes until its goal is met.

**📌 Deducting Cultivation Hours in Favor of the Integration Reform** – in the 2018–2019 school year, the Ministry of Education started uniformly deducting 7% of cultivation hours granted to elementary schools as part of the differential budgeting model and 9% of the cultivation hours granted to junior high schools. This is to allocate additional hours to integrate students with special needs into regular classrooms. In the 2021–2022



school year, about 11,000 hours were deducted from 152,000 cultivation hours in elementary schools in favor of integration and containment and about 8,400 hours were deducted from 90,000 cultivation hours in junior high schools. Using the differential budget designated for minimizing gaps in the educational system for other school needs, as essential as they are, interferes with the allocation of necessary cultivation hours to schools that rank high on the cultivation index. Therefore, the Ministry of Education decision to deduct a fixed quota of cultivation hours in favor of integration hours consistently decreased the annual quota of cultivation hours (de facto) in the Ministry's budget to be allocated amongst schools and thus weakened the progressive element in the gap minimizing plan intended to compensate students from a low socio-economic background according to the cultivation index.

**The Influence of Local Authorities' Education Budgets and Households' Education Expenditure on the Gaps in the National Allocation of Resources on Education** – the local authorities' education budget was about NIS 25.2 billion in 2020. Most of the budget, NIS 17.5 billion (69%), originates from the Ministry of Education, and the rest, NIS 7.7 billion (31%), was funded by other local authorities' sources. The gaps between local authorities of low socio-economic status and those of high socio-economic status in expenditure per student reach thousands of NIS annually. For instance, in 2020, there was a gap of NIS 3,705 between clusters 1–2 and 5–6; and a gap of NIS 5,089 between clusters 1–2 and 7–8. The Ministry's differential budgeting grants budgetary advantage to students from low clusters to minimize achievement gaps in the educational system; however, schools' budgeting that originates from the local authorities shrinks the differential budgeting and harms its ability to minimize these gaps. As for households' expenditure on education, the average expenditure per student in elementary education amongst the high clusters (8–10) is NIS 7,392 higher (more than twice) than the expenditure amongst the low clusters (1–3). Similarly, the average expenditure per student in junior high school amongst high clusters is NIS 7,356 higher (twice as big) than the expenditure amongst low clusters (according to data from 2018). It is doubtful that the differential addition of resources granted by the Ministry managed to minimize the gaps significantly.

**Transparency of Information on Schools' Budgetary Resources** – despite the government decisions: a decision made 11 years ago about the reconstruction of management tools in the education system, and a decision made 9 years ago about the transparency of education budgets – the development of a data reporting array, the local authorities are required to use, has not been completed yet. By the audit end date, September 2022, the data reporting array had not been established. Hence, neither the Ministry of Education nor any other entity, including the public, has information on the overall resources granted to each educational institution. This limits the information held by the entity that plans the differential allocation of resources to educational institutions. For the allocation to be effective, the educational institutions' different financial resources must be considered.



**Changes in Students' Achievements in PISA Tests<sup>2</sup> Since the Gap Minimizing**

**Plan** – in 2015–2018, there was a decline in the achievements of all Hebrew-speaking students (with a slight rise of 6 points amongst students of low socio-economic background in science literacy test). The most significant decline was among students of high socio-economic background (ranging between 5 points in reading literacy and 10 points in science literacy). It was further found that the gaps between the grades of students from high socio-economic backgrounds and those from low socio-economic backgrounds were moderately minimized and even very moderately minimized in reading literacy – 3.4%. As for the Arabic-speaking students, the gaps in the PISA tests' grades increased considerably between students from high socio-economic backgrounds and students from low socio-economic backgrounds: the gap in reading literacy almost tripled (from 22 to 65 points), the gap in math literacy more than doubled (from 32 to 67 points), and the gap in science literacy almost doubled (from 31 to 55 points). The gaps increased across all study disciplines due to a decline in the grades of students from a low socio-economic background and a rise in the grades of students from a high socio-economic background (except for science, in which the average grade of students from a high socio-economic background did not change). It should be noted that the participation rate of ultra-orthodox institutions for boys was minimal and unrepresentative. Thus, the gaps that were measured do not represent the whole influence of this sector.

**Evaluation of the Differential Budgeting Model** – although the evaluations during

the second and third years of model implementation (2015–2016 school year and 2016–2017 school year) resulted in significant findings, such as the school principals were not sufficiently familiar with the model and believed that it could not possibly minimize gaps, since the cultivation index does not reflect the real difficulties the schools are facing, and although these findings justified to continue the evaluation in the following years, it was conducted only for two years. During these years, only some of the cultivation hours were allocated (35% during the second year and 55% during the third year); whereas, during the following years, more cultivation hours were gradually added until full implementation of the model was met in the 2018–2019 school year – the National Authority did not evaluate the model for Measurement and Evaluation in Education (RAMA) or by any other entity.


**Ranking of Ultra-Orthodox Elementary Schools According to the Cultivation**

**Index** – although the city of Bnei-Brak is part of a low socio-economic cluster (2), half of the ultra-orthodox elementary schools in Bnei Brak are ranked within the high cultivation quantile (1), which almost does not require cultivation, as opposed to 3% of all elementary schools in other local authorities in cluster 2. 82% of the ultra-orthodox

2 PISA – Program for International Student Assessment – participated by Israel. The PISA Program is designated to enable each state to measure the outputs of its education system and to assess students' achievements based on an international, joint and agreed-upon point of view. The assessment is conducted every three years and is designated for 15-year-old students.



elementary schools in Bnei Brak are ranked amongst strong cultivation quintiles (1 & 2), as opposed to 16% in all the other local authorities in cluster 2. Therefore, most ultra-orthodox elementary schools in Bnei Brak (almost all elementary schools in Bnei Brak are ultra-orthodox) are considered strong according to cultivation index and thus are not entitled to a high rate of cultivation hours. This gap derives from the mode the cultivation index of ultra-orthodox schools in Bnei Brak is generally calculated and the component of parents' education in particular. This component is calculated according to the number of years of study of the most educated parent. Bnei Brak refers to the fathers who have studied in the Yeshiva (Jewish institution that focuses on studying religious texts) for many years.

 **The Marom Program as Complementary to the Differential Budgeting Model** – the Pedagogical Administration has initiated and developed the Marom Program to provide administrative, pedagogical, and organizational long-term support to schools that rank high on the cultivation index in addition to the allocation of additional resources to these schools as part of the differential budgeting model. The program's overall budget between September 2015 to August 2022 was NIS 140 million. However, in the 2018–2019 school year, which was the last year that schools could join the program, 59% of the elementary and junior high schools from the weakest quintile (quintile 5) did not participate in the program. Thus, most schools that needed the Marom Program the most – 423 out of 711 schools in the 2018–2019 school year – did not participate. It was found that the Marom Program did not provide the needed solutions to most of the schools considered as wick according to the cultivation index – which were the main target population of the differential budgeting model. Moreover, the Ministry of Education did not establish an internal team or form a perception regarding a comprehensive, systemic solution for schools with a low socio-economic population, as was suggested by the inter-ministerial team in 2014. Such a perception including budgetary, pedagogical, and organizational measures that could have led to the allocation of a more significant number of hours according to the differential budgeting model, meeting the objective of minimizing the gaps between the achievements of low socio-economic students and those of high socio-economic background.



**Progressive Allocation of Additional Standard Hours** – the additional standard hours (that include cultivation hours and other baskets) in elementary education in the Jewish sector increased the basic allocation (of weekly hours per class) by 5 hours for the medium-strong cultivation quintile (from 34 hours to 39 hours) and by up to 11 hours for the weak cultivation quintile (from 37 hours to 48 hours). The Arab sector increased the basic allocation by 4 hours for the medium-strong cultivation quintile (32 to 36 hours) and 8 hours for the weak cultivation quintile (35 to 43 hours). In junior high schools, the additional standard hours in the Jewish sector increased the basic allocation by 14 hours for the medium-strong cultivation quintile (from 35 to 49 hours) and by up to 26 hours for the weak cultivation quintile (from 35 to 61 hours), and in the Arab sector by 10



hours for the medium-strong cultivation quintile (from 33 to 43 hours) and by up to 18 hours for the weak cultivation quintile (from 33 to 51 hours) (according to data from 2019–2020).

**The Impact of Additional Cultivation Hours on the Allocation of the Ministry of Education's Budget to Junior High Schools** – unlike elementary education, in junior high schools, most of the gap in favor of the weak cultivation quintile, as opposed to the strong cultivation quintile, was created after the implementation of the plan began, and the plan increased it by 21.4% over the years (from 11.6% in the 2013–2014 school year to 33% in the 2019–2020 school year). In other words, the implementation of the plan caused 65% of the progressive gap, and thus, the plan's impact on the gap in favor of the weak cultivation quintile, as opposed to the strong cultivation quintile, was very significant. In addition, the average budgetary addition per student in the weak cultivation quintile, created by the increased gap in its favor, is about 21% of the budget granted without the increase.

---

## Key Recommendations



**Allocation of Additional Cultivation Hours to Improve the Achievements of Students from Low Socio-Economic Backgrounds** – given the gaps in national allocation of educational resources between low socio-economic students and high socio-economic students, despite the implementation of the gaps minimizing plan based on the differential budgeting model, and given the gaps between the student's academic achievements reflected in the Meitzav exams, and especially in light of the significant gaps reflected in the results of the international PISA tests – it is recommended that the Ministry of Education consider the extent to which the addition of cultivation hours, as part of the budgeting model, can improve the academic performance of low socio-economic students. Moreover, it is recommended that the model be compared with models adopted by other countries. The Ministry of Education should identify the past measures that generated the most significant added value to the improvement in the achievements of low socio-economic students and the minimization of the gaps between them and high socio-economic students, and focus on these measures alongside newer measures and plans to use the public resources most efficiently. Furthermore, it is recommended that the Ministry of Education, together with the Ministry of Finance and representatives of local authorities, form a multi-annual plan to comprehensively respond to budgetary, pedagogical, administrative, and organizational issues in low-socio-economic status of schools with different sectors of the population.



**Maintaining the Progressiveness of Cultivation Hours Allocation to Schools and Their Original Designation in Light of the "Integration & Containment Reform"** – it is recommended that to maintain the level of progressiveness in the allocation of

resources to schools, according to their socio-economic status, as set in the gap minimizing plan, the Ministry of Education allocate to the schools cultivation hours according to their original designation while searching for an alternative funding source for the Integration Reform, or alternately, refrain from deducting a fixed rate of the cultivation hours in favor of the Integration Reform, but rather apply a progressive rate which becomes lower gradually according to the cultivation quintile. It is further recommended that the Ministry of Education develop a mechanism for an ongoing updating of the necessary annual addition to the quota of cultivation hours in elementary and junior high schools, according to the rise in the number of students, to prevent erosion of the rate of cultivation hours out of the total number of standard hours allocated to the schools.



**Transparency of Local Authorities' Education Budgets and Reviewing Their Impact and the Impact of Households' Expenditure on Education on the Gaps in National Allocation of Resources** – the Ministry of Education, Ministry of Interior, and Ministry of Finance should implement the government decision made 11 years ago regarding the reconstruction of managerial tools in the education system and the decision from 9 years ago regarding transparency of education budgets. It is recommended that the Ministry of Education and the Ministry of Interior collaborate and form a framework for reporting local authorities' data required at the level of individual educational institutions. As part of reviewing the differential budgeting model, it is recommended that the Ministry of Education, in collaboration with the Ministry of Finance, the Federation of Local Authorities in Israel, and the local authorities, study and analyze the regressive impact of local authorities' budgets and households' expenditure on education on the gaps in national allocation of resources amongst students from different socio-economic backgrounds and consider measures to minimize them.



**Evaluating the Effectiveness of the Implementation of the Differential Budgeting Model** – it is recommended that the Ministry of Education evaluate the implementation of the differential budgeting model and the impact of the additional cultivation hours on gap minimization from the 2014–2015 school year; form a suitable policy to increase the effectiveness of the model and the utilization of cultivation hours; set quantitative objectives, according to the evaluation findings, to ensure improvement of achievements and minimization of gaps and measures needed for this purpose; implement the updated plan and follow up on its implementation and accomplishments. It is recommended that the Ministry of Education consistently supervise the plan until its end (or until it is fully implemented in the education system), summative evaluate the plan, and ensure the findings are considered when forming a follow-up policy.



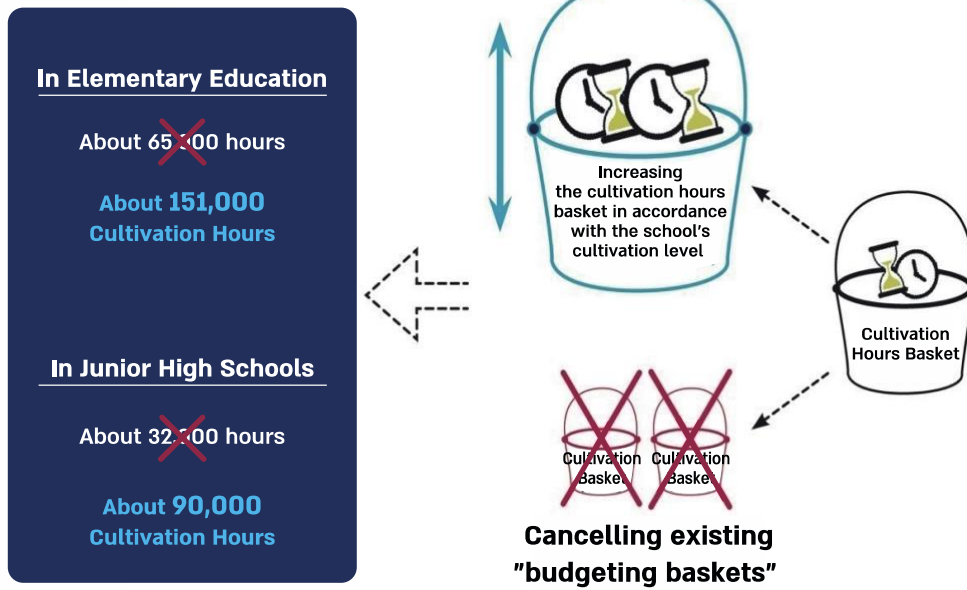
**Evaluating the Effectiveness of the Marom Program, its Improvement, and Creating a Link Between the Program and the Differential Budgeting Model** – it is recommended that the Ministry of Education clarifies the criteria to participate in the Marom Program and the program's objectives, prioritizing schools with low socio-economic students, and measure its accomplishments. It is recommended that the Ministry of Education emphasize the link between the program and the allocation of cultivation hours through the differential budgeting model. Based on these objectives and measures, it is



recommended that the Ministry of Education form a comparative evaluation format regarding the contribution of the updated program to schools, including a unified external evaluation for all participating schools, to be used as a reference for the program's principles and directions and as a tool detecting the implementation mode by the schools and its contribution to their function. It is further recommended that following the reinforcement of the linkage between the Marom Program and the allocation of cultivation hours as part of the differential budgeting model, the Ministry of Education perform a joint evaluation of the two processes as complementary processes, as it started doing with the first two RAMA evaluations.

## Enlarging Cultivation Basket in Elementary and Junior High Education

**+35,500 hours in elementary education**  
**+21,000 hours in junior high schools**  
Approx. 4,000 hours - "Safety Net"\*



\* Hours designated for educational institutions that the outline change will severely harm.



---

---

## Summary

The most recent plan of the Ministry of Education (2014) to minimize gaps between students is based on the differential budgeting model of teaching hours to improve the performance of schools that are of low socio-economic status and to minimize gaps between students from different sectors of the population and from different socio-economic backgrounds (mostly in elementary and junior high schools where the model is implemented). According to the audit's findings, about eight years after the plan's implementation began, the Ministry of Education still has not met its objectives. Despite the differential allocation of budgets, the budgetary gaps have not been bridged. Thus, the Ministry's reliance on differential allocation of budgets according to the student's socio-economic status is questionable.

The Marom Program, to provide ongoing support to low socio-economic schools and advance them at the administrative, pedagogical, and organizational levels and to complement the differential budgeting model, has not provided the necessary solutions to most of these schools, which were the main target population of the differential budgeting model.

It is recommended that the Ministry of Education cooperate with the representatives of local authorities, the educational networks, and the other ownerships on schools in the different sectors to form a multi-annual plan to comprehensively respond, including budgetary, pedagogical, administrative, and organizational aspects, to the low cultivation quintile schools in the various sectors of the population.

To increase the effectiveness of the differential budgeting model, the differential allocation of resources to the schools with low socio-economic student it is recommended to consider the school's different financial resources, including resources provided by the local authorities and households. At the same time, the Ministry of Education should identify its past measures – pedagogical, administrative, and organizational – that generated maximal added value to the improvement of the achievements of low socio-economic students and to minimization of gaps between them and high socio-economic students. It should focus on these measures, alongside new measures and plans that will be formed, to utilize the public resources of the education system and its expertise most effectively.