

The Israeli Education System: An Overview

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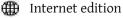
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Nachum Blass*

Introduction

This chapter presents some of the main developments in the education system in recent years. These are by no means all of the important developments, but they are the ones that seem noteworthy and interesting. These changes have taken place over four dimensions of the system: composition of the student population, Ministry of Education budget, profile of teaching personnel, and students' educational achievements.

1. Composition of the student population

Israel's student population has increased by 43.6 percent since 2000. This is an increase of 2 percent per year, which is exceptional compared to other developed countries, and uncommon even for developing countries. The growth was not consistent over the period, across age levels, or population subgroups. Throughout the period, the fastest growth occurred in the Bedouin and Haredi (ultra-Orthodox) education streams. Changes in the growth rate in the various educational streams are also of particular importance for this period (Appendix Tables 1 and 2). In the Arab and Druze education systems, the rate of growth dropped steadily throughout the period; in the Haredi and Bedouin systems, there was also a decline, although growth remained relatively high. In Hebrew State and State-religious education, the rate of growth actually increased.¹

The preschool student population largely resembles the population in the past which is important for making projections regarding the composition

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¹ The Hebrew and Arab education systems are based on the supervisory authority and language of instruction. The Hebrew education sector includes Hebrew State, State-religious, and Haredi schools. The Arab sector includes Arab, Druze, and Bedouin education. The majority of students in Hebrew education can be assumed to be Jewish, and the majority of students in the Arab sector can be assumed to be Arab Israelis. Nevertheless, the division by the Central Bureau of Statistics is based on the language of instruction and not the religion or sector of the students.

of the student population for the coming decade. The number of children in preschool increased between 2000 and 2015 by 81 percent (compared to a 43 percent growth in the total population). The fastest growth rate was between 2010 and 2015 and coincided with the implementation of the Compulsory Education Law for ages 3-4.² During those years, growth in preschool students in the Hebrew State education stream was the fastest. The Hebrew State-religious and Bedouin education streams have grown at the fastest rate in the most recent years (2015-2018) (Table 1). It is reasonable to assume that some of the growth in the State-religious education system comes from the transfer of students from the Haredi education stream, or from a drop in the number of those entering Haredi education in the first place. With regard to Bedouin education, its growth rate continues to reflect the impact of the implementation of the Compulsory Education Law as well as this subpopulation's higher birth rate.

Table 1. Change in preschool populations
Ratio between time periods

	2000/2005	2005/2010	2010/2015	2015/2018	2015/2020 Extrapolation	2000/2018
Hebrew State	0.98	1.15	1.36	1.07	1.12	1.64
Hebrew State- religious	1.01	1.20	1.31	1.11	1.18	1.75
Haredi	1.33	1.21	1.17	1.09	1.15	2.06
Arab	1.45	1.11	1.21	1.03	1.04	1.99
Bedouin	1.76	1.07	1.21	1.11	1.19	2.53
Druze	1.09	1.08	0.98	0.96	0.94	1.10
Total	1.15	1.16	1.27	1.07	1.12	1.81

Source: Nachum Blass, Taub Center | Data: CBS, Statistical Abstract of Israel, various years

Previous research by the Taub Center shows that the substantial growth in the student population of the Arab and Haredi education streams actually ended around 2010, and was accompanied by a simultaneous increased growth rate in the Hebrew State and State-religious streams. The Center's

² It is also worth noting the particularly high growth rate between 2000 and 2005 in the Arab and Bedouin education streams. The most likely explanation for this is the efforts to implement the Compulsory Education Law, which focused at that time on the socioeconomically weakest localities.

research also finds that the gaps between the growth rates of the various streams of Hebrew education are considerably smaller than expected in light of the fertility rates within religious subgroups in Jewish society (Blass and Bleikh 2016; Blass and Douchan 2006; Weinreb and Blass 2018).

2. Budget

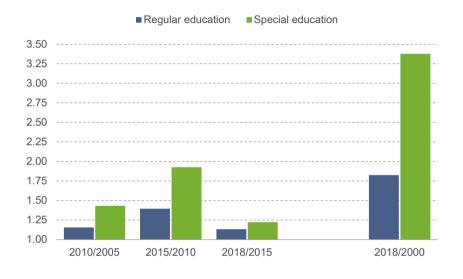
This section reviews the Ministry of Education budget with special attention given to the share of the budget allocated for Special Education between 2000 and 2018. Figure 1 shows that the budget for Special Education increased at almost twice the rate of the overall education budget, at a time that witnessed an almost unprecedented growth in the Ministry of Education's budget (an 83 percent increase). The reason for the rise in the Special Education budget is the tremendous growth in the number of students requiring Special Education. While the overall number of students increased by 33 percent since 2005, the number of students in Special Education rose by 127 percent (four times the growth of the budget).4 It is important to note that there was no substantive change in the share of students with special needs who are mainstreamed; their share ranges between a minimum of 38 percent and a maximum of 44 percent. Among those students learning separately, the division between students in schools for students with special needs and those who are mainstreamed but in special classes has also remained quite stable: one-half are in special schools and the other half are in separate classes in regular schools. The growth in the number of Special Education students was particularly rapid among students diagnosed with autism their number rose from 894 in 2000 to 11.145 in 2018 — and students with serious behavioral disorders — their number rose from 2,347 to 17,483 over the same period.

³ After deducting the Special Education budget, the Ministry's budget grew by 71 percent, and the Special Education budget increased by 138 percent.

⁴ It appears that the exceptional increase was not the result of a systematic decision by the administration of the Ministry of Education (each year decisions were made to increase the budget at a much smaller rate), but was due to developments over which the Ministry had no control (as detailed in the Ministry of Education's explanations of its proposals to change the Special Education Law this year), which ultimately led to changes in the law at the request of the Ministry of Education. Changing the Special Education Law sparked a fierce public controversy. All of the professional echelon objected to it and saw it as the de facto cancellation of the Dorner Commission recommendations, but that is a subject for another study.

The growth patterns of the Special Education student population and their placement in the various frameworks have significant consequences for the budget. For instance, mainstreaming a larger share of Special Education students could reduce the rise in the Special Education budget since integrated frameworks appear to be less expensive.⁵

Figure 1. Change in the regular and Special Education budgets Ratio between time periods



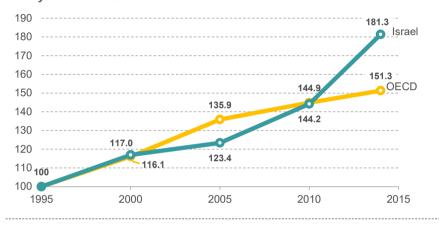
Source: Nachum Blass, Taub Center | Data: Ministry of Education

Another aspect of the budget discussion is the changes in expenditure per student in Israel compared to the average in the OECD. The data in Figure 2 indicate that the Ministry of Education's real budget per student increased

⁵ Opinions differ as to the impact the full implementation of the Dorner Committee recommendations would have had on the cost of integrated frameworks. This is particularly relevant to the recommendation that the budget "follow the child" and not depend on the organizational framework in which the child studies. The debate has yet to be settled but it is most likely that the cost of integrated frameworks would have been lower, if only because implementation of the recommendation would have considerably reduced the cost of busing to special schools.

between 2000 and 2014 at a higher rate than in the OECD.⁶ As can be seen, the growth rate of expenditure per student was similar between Israel and the OECD from 1995 to 2000, higher in the OECD between 2005 and 2010, and higher in Israel since 2010. These figures in part reflect the differential effects of the 2008 economic crisis on Israel and on the other OECD countries.

Figure 2. Rate of change of per student expenditure Index year: 1995 = 100



Source: Nachum Blass, Taub Center | Data: OECD, Education at a Glance 2018

Since 2014, the growth rate of the Ministry of Education's budget has also been very rapid as a result of the implementation of the Oz Letmura ("Courage to Change") labor agreement, the implementation of the Compulsory Education Law for ages 3-4, and the introduction of a number of resource-heavy programs: reducing the number of students per class, implementing the differential budget standard in primary school education, activities over school vacations for students in the youngest primary classes, and more. In light of these developments, it is reasonable to believe that differences in the rate of change of expenditure per student between Israel and the OECD will continue to grow. If this should occur, it is highly likely that the average expenditure per student in Israel will come close or be equal to the average expenditure in the OECD. In 2015, the expenditure per student in primary education in Israel in PPP dollars was \$7,981 compared to \$8,631 in the OECD. The corresponding figures in high school education were \$7,987 and \$10,010, respectively (OECD, Education at a Glance 2018).

^{6 2014} is the last year for which OECD data were available.

3. Teaching personnel

The period between 2000 and 2018 is extremely important in the Israeli education system with respect to teaching personnel. The Dovrat Commission (the Task Force for the Advancement of Education in Israel headed by Shlomo Dovrat) was appointed in 2003, and, in 2004, it submitted its recommendations; in 2007, the Ofek Chadash ("New Horizon") labor agreement was signed with the Teachers' Union, and, in 2011, the Oz Letmura ("Courage to Change") labor agreement was signed with the Secondary School Teachers Association. The recommendations of the Dovrat Commission impacted many areas, but their main influence was on changes in the employment structure and compensation principles for teachers and, subsequently, a change in the profile of the teacher population.

First, we present figures on primary education — where the transition to Ofek Chadash is complete, and highlight the differences between Hebrew and Arab education (Appendix Table 4).

Primary school

Overall, between 2000 and 2018, the growth rate in the number of teachers in Hebrew primary education was similar to the growth rate in the number of students. However, from 2000 to 2010, the number of teachers grew by 14 percent, whereas in the following eight years, it increased by 28 percent. The average teaching position rose from a 73 percent-time position in 2000 to 77 percent in 2018. In addition, fears that teachers would leave their profession en masse following these new labor agreements did not materialize.

In Arab education, the numbers were very different. In the first decade, the number of teachers increased by 58 percent, whereas in the following seven years, it increased by only 20 percent. There is no doubt that this reflects rapid growth in the number of students in Arab education in the first decade, and a sharp slowdown of growth in the last years. It is noteworthy that, despite oft-heard claims of a surplus of teachers in the Arab sector, the average job position for teachers in primary education hardly changed and even rose a little, from an 82 percent-time position to 84 percent.⁷

⁷ In Israel, where the Ministry of Education has a major impact on teacher employment patterns, it is expected that when there is a teacher surplus there will be a drop in the teacher hours worked. The reason is the high competition over vacant teaching positions and the Ministry's desire to distribute the vacant positions between more graduates of the teachers' training institutions.

Another trend seen in Hebrew education is a slight drop in the feminization of the system: the share of women dropped from 90 percent of teaching personnel in 2000 to 86 percent in 2017. In Arab education, the trend is in the opposite direction, and the share of women rose from 65 percent to 78 percent of teaching personnel, respectively. The trends also differ with respect to average teacher age and seniority in the two sectors. In Hebrew education, the average age and seniority have been dropping since 2010, whereas in Arab education, there has been an opposite trend. Regarding the level of education among teachers, in both educational streams there has been a dramatic improvement. In Hebrew education, the share of teachers with an academic degree (rather than a teaching certificate) rose from 50 percent in 2000 to 89 percent in 2018, and, in Arab education, their share rose from 37 percent to 94 percent (higher than in Hebrew education), respectively.

High school

In high school, too, the Oz Letmura program has been almost fully implemented, and, in 2017, a new labor agreement was signed which further improves teachers' terms of employment. Since the signing of the Oz Letmura agreement, the number of teachers in Hebrew education has risen by 32 percent. The growth rate between 2000 and 2010 was much lower than from 2010 to 2018. The number of teachers who joined high schools was much greater (more than 7,000) than the number of full-time positions (FTE) that were added (2,000), and led to a drop in the average job position: from 78 percent-time in 2010 to 70 percent in 2018. In Arab education, the situation is similar: the average job position dropped during those years from 95 percent to 85 percent.

Similar to primary education, the feminization process has almost stopped in Hebrew education (87 percent of teachers were women in 2010 compared to 86 percent in 2018) while it grew stronger in Arab education,

⁸ We do not ascribe any negative connotations to the "feminization" of professions. However, we believe that it is most desirable for the teaching profession to reflect more fully the diversity of the student population. For this, as well as other reasons, we would like to see the entrance of more male teachers into the school system.

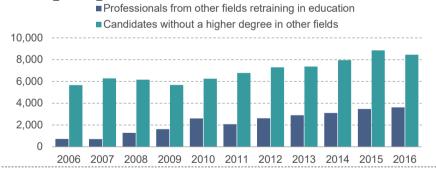
⁹ Similar agreements were signed for primary and middle school teachers.

¹⁰ It is worth paying attention to these figures when the media reports a teacher shortage. There is no doubt that certain schools have difficulty staffing their teaching positions, especially in subjects like math and English, but the overall situation does not reflect a shortage — to the contrary.

where the rate of women teaching in high schools rose from 36 percent in 2000 to 57 percent in 2018. The process of the rise in the average age of teachers has also stopped in both education streams. Finally, in both streams the process of academization of the teaching faculty is nearly complete (92 percent), although the share of teachers in Hebrew education with master's degrees is still somewhat higher than their rate in Arab education (45 percent compared to 35 percent). In conclusion, it can be stated that, as a whole, the feminization of the teaching profession has stopped (except in Arab education), there has been a real improvement in the academic level of teaching staff, and there are no actual supply or demand surpluses (except at the high school level in Hebrew education).

As part of the discussion of personnel in the education system, a subject that we feel is not receiving sufficient attention should be briefly noted: the increasing trend of professionals transitioning from other fields into teaching. Figure 3 shows that, from 2006 to 2016, the rate of professionals retraining into education out of the total number of new students in academic teachers colleges has risen sharply. This phenomenon is important for two reasons. The first is that it indicates that the teaching profession is receiving new and more positive appreciation by the academic community. The second is that the teacher population is receiving a "high quality" injection of personnel with professional training in other fields. 12

Figure 3. Academic history of those entering academic teaching colleges



Source: David Maagan, Central Bureau of Statistics

¹¹ The figures on this subject are based on various studies by David Maagan, CBS.

¹² We write "high quality" although the assumption that an academic qualification equates with "teaching quality" is still not substantiated by academic empiric research.

4. Educational achievements

Focusing on educational achievements does not mean that other important issues in the education system can be ignored. The essence and goals of education, the profile of graduates, relations between teachers and students, school climate — these are all important subjects, and possibly even more important than the amount of knowledge in math and English as measured by written tests.

There are two reasons for the focus on educational achievements: one intrinsic and the other practical. The intrinsic reason is that, despite the importance of all of the aforementioned issues as well as others, academic content is still perceived by the public as the main purpose of school, and success or failure in this realm is largely measured by scholastic achievement. The practical reason is that educational achievements and gaps in achievement between different groups are widely studied and measured, and offer accessible data for drawing conclusions and making evaluations. This fact does not mean that "we measure what is measurable and ignore what is important." Educational achievements are a very central part of the goals of school. We can only hope that the other issues will also be studied and investigated to the same extent, and will be included in future reviews.

The discussion of educational achievement is based mainly on the data from the Meitzav tests, and the results of international tests (PIRLS, TIMSS, and PISA), and will focus on identifying and describing the change in trends since the beginning of the 21st century. ^{13, 14} Due to the desire for brevity in this review, national level data of achievements and gaps are presented. ¹⁵

There is a great deal of truth in the skepticism surrounding the ability of national and international tests to reflect students' knowledge and skill levels accurately. For instance, these are paper and pencil tests that touch on only a small part of learned material; the exaggerated importance attributed

¹³ Meitzav — Measurement of School Growth and Efficiency for primary and middle school; PIRLS (Progress in International Reading Literacy) — for primary school; TIMSS (Trends in International Mathematics and Science Study) — for middle school; PISA (Program for International Student Assessment) — for high school.

¹⁴ A fuller discussion of the bagrut (matriculation) exams is in a separate chapter of this book (Fuchs, Yanay, and Blass 2018).

¹⁵ A more detailed discussion of the comparison between students in Hebrew and Arab education – including controlling for socioeconomic background data – appears in another publication by the Taub Center (Blass 2017), and an extensive and comprehensive discussion of the issue of gaps in all of their aspects will appear in the book *Inequality in Education*, Taub Center (future publication).

to them (especially the Meitzav) leads to an emphasis on learning material especially for the test by rote; pressure on schools and teachers to show high achievement leads to the unauthorized assistance of struggling students during the tests or deterring students who may not succeed in the tests from participating in them. All in all, the tests may do more harm to the education system than good, and educators might do well to consider replacing them with tests of much smaller student samples over different and additional subjects. Be that as it may, for the purpose of this discussion, there are two main reasons to examine achievements on these tests. One reason is that they are currently the only tests that enable comparisons among groups at a single point in time and along different points in time. Second, even if their scientific basis is weak, the public attaches importance to these tests and views them as a reflection of the quality of the education system. This makes Israel's attainment on these tests difficult to ignore.

Dissatisfaction with overall student achievement is an old story that is not unique to Israel. The results of the Meitzav tests and the international tests regularly fail to meet expectations (the truth is that they never meet expectations, in any country), and the gaps in educational and academic attainments between students from rich and poor households and between Jews and Arabs are very wide. This is true both when looking at the data only in Israel, and when comparing Israel to OECD countries and other countries that participate in international exams. There is importance, however, in examining the trends over time to see whether the education system's attainments are improving or deteriorating. From that perspective, it is extremely important to look at the data because of its immediate implications for policy decisions. An upward trend would indicate that existing policies are producing positive results and should be continued, whereas a trend of excessively slow improvement, stagnation, or deterioration would indicate the need for a substantial change of course (see also Tamir 2018).

The Meitzav exams (Measurement of School Growth and Efficiency)

Table 2 compares the results of the 2008 Meitzav tests to the results of the 2017 Meitzav tests. ¹⁶ The table indicates that there has been a significant improvement in scores, with a range between an almost full standard deviation in sciences in the eighth grade to one-fifth of a standard deviation in English in the eighth grade. An average of half a standard

¹⁶ In 2008, the tests were standardized to enable comparisons over time: the average grade in all subjects and at all age levels was 500, and the standard deviation was 100.

deviation throughout all the tests is undoubtedly a very impressive rise. For comparison, during approximately the same time period the improvement of test scores in the United States, as measured by the NAEP tests, was much smaller (Blass 2016).

Table 2. Scores, standard deviation, and coefficient of variation on the Meitzav exams, 2008 and 2017

	Exam	score	Coefficient	of variation
	2008	2017	2008	2017
5 th grade				
Math (standard deviation)	500 (100)	566 (72)	0.20	0.13
English	500 (100)	534 (98)	0.20	0.18
8 th grade				
Math	500 (100)	539 (89)	0.20	0.17
English	500 (100)	523 (83)	0.20	0.16
Science	500 (100)	587 (113)	0.20	0.19

Note: In 2008, scores were fixed at 500, with a standard deviation of 100, and a coefficient of variation of 0.02.

Source: Nachum Blass, Taub Center | Data: RAMA, various reports

The international tests

Israel participates in all of the international tests, and the results regularly meet with public disappointment. Israel has always been one of the participating countries with the widest achievement gaps between its strongest and weakest students, and its scores are around the all country average, at best.¹⁷ These results are well-known and documented (Blass 2011; Ben-David 2011, 2018). What is less well-known, and worth publicizing, is that, since 2000, Israel has been in an ongoing process of improving test scores and reducing achievement gaps.¹⁸

 $^{17\,}$ Except for the TIMSS test held in the late 1960s where there are many reservations about the sample of Israeli students who participated in this test.

¹⁸ As noted previously, in this chapter, the discussion is about the gaps within the Israeli education system as a whole, and not the gaps between different population groups and within the groups.

Table 3 shows Israel's achievements on the international tests in terms of test scores and coefficients of variation. The table presents two comparisons: one — between all countries participating in the tests; and the other — between countries participating in at least the first and last tests (for example, PISA 2000 and PISA 2015). The second comparison is necessary because the breakdown and number of countries that participated in the tests changes from one test to another, and, in order for the comparison to be meaningful, only countries that participated in both should be considered.¹⁹ The result is very similar to that of the Meitzav tests presented in Table 2, that is, students in the Israeli education system improved their grades and gaps narrowed, in almost all the tests and, in some of them, very significantly.

- a. Test scores: In all of the test scores, there is an improvement of between 21 and 45 points for Israeli students. The improvement was larger than the average improvement in all countries, and larger than the average improvement of the countries participating in the first and last tests. Furthermore, the average score of Israeli students was a little higher than the average of all students in the PIRLS and TIMSS tests, and lower than the average of all the students in the PISA exam (except for Reading in 2015). In contrast, compared to the average scores of the countries participating in all of the tests, Israel's average score was always lower (except for the TIMSS in 2015), but the gap narrowed substantially.
- b. Standard deviation: When looking at standard deviations (see Table 4) the standard deviations narrowed for some tests and grew for others.
- c. Coefficient of variation (CV): The growth in standard deviations may indicate a widening of gaps, but when seen in the context of the rise in scores the coefficient of variation may better reflect the gaps (Table 4). While the average in all of the countries participating in the tests and the countries participating in both tests did not change, in Israel the CV dropped, and in some tests it did so significantly.

¹⁹ It is important to note that all the countries participating in the first and last tests are developed countries (members of the OECD or satellite countries).

Table 3. Test scores and coefficient of variation for students in Israel, all countries, and participating countries

Participating countries are those taking the first and last exams in the analysis period

	Israel	All countries	Participating countries
PIRLS			
2001	509	500	532
2016	530	511	542
Difference in score	+21	+11	+10
(Difference in coefficient of variation)	(-0.017)	(-0.043)	(-0.002)
TIMSS-Math			
1999	466	487	496
2015	511	481	506
Difference in score	+45	-6	+10
(Difference in coefficient of variation)	(0.000)	(0.000)	(-0.003)
TIMSS-Science			
1999	468	_	507
2015	507	486	518
Difference in score	+39	0	+11
(Difference in coefficient of variation)	(-0.019)	(0.000)	(-0.014)
PISA-Math			
2000	444	482	482
2015	470	472	482
Difference in score	+26	+10	0
(Difference in coefficient of variation)	(-0.070)	(-0.000)	(-0.010)

Table 3 (continued). Test scores and coefficient of variation for students in Israel, all countries, and participating countries

Participating countries are those taking the first and last exams in the analysis period

	Israel	All countries	Participating countries
PISA-Science			
2000	446	482	483
2015	470	477	487
Difference in score	+24	-4	+4
(Difference in coefficient of variation)	(-0.050)	(-0.004)	(-0.006)
PISA-Reading			
2000	461	483	483
2015	483	475	485
Difference in score	+22	-8	+2
(Difference in coefficient of variation)	(+0.002)	(+0.003)	(-0.001)

Source: Nachum Blass, Taub Center | Data: RAMA

Table 4 presents the number of countries participating in all of the tests during the first and last years, and Israel's ranking in terms of score improvement relative to those countries. In all of the tests, except for the PISA test in reading, it is apparent that Israel was one of the countries with the greatest improvement in achievements. For instance, in the three PIRLS and TIMSS tests, Israel was one of the top three countries in terms of improving test scores. In terms of reducing gaps, Israel was first in the PIRLS test, as well as in the PISA test in math and sciences. Unfortunately, the situation is much less positive in the PISA-Reading test.

Table 4. Israel's ranking on selected international exams

	PIRLS	TIMSS Math	TIMSS Science	PISA Math	PISA Science	PISA Reading
Number of participating countries in first and last exam period	14	12	12	37	37	37
Improvement rating (between first and last exam)	3	1	2	7	8	8
Standard deviation rank (between first and last exam) (1= maximum narrowing of the deviation)	6	9	9	1	1	25
Improvement in the coefficient of variation on the participating students' scores (between first and last exam) (1= maximum narrowing of coefficient)	1	6	3	1	1	21

Source: Nachum Blass, Taub Center | Data: RAMA

It should be emphasized again that, despite the positive picture in terms of these trends, the gaps in educational achievements in Israel are still quite large. These gaps, and especially their correlation with socioeconomic background data and their identification with two main population groups — Arab Israelis and Haredim — are the biggest obstacle facing the Israeli education system.²⁰

²⁰ This chapter does not discuss the achievements of Haredi students because they hardly participate in Meitzav and international tests. However, since they also rarely study the subjects under review, it can be assumed that had they been tested, they would have had very low achievements.

Conclusion

The Israeli education system is under public scrutiny, and rightfully so. Judgment of the system is usually harsh and sheds light on its weaknesses, and so it should. However, it is worth pointing out that not everything is negative, and that, in many areas, progress has been significant. The education system is an important layer in creating a strong and thriving society, and we should do everything possible to improve and advance it. Criticism is one of the most effective tools for encouraging fresh thinking and spurring original methods of improvement. At the same time, we should not lose sight of positive developments in the level of teaching personnel, including the growing infusion of professionals from other academic areas, as well as a constant improvement in students' educational achievements at all age levels as shown by Meitzav and international test scores. Recognizing the efforts of those actively engaged in the education system and showing them appreciation are also powerful ways to cultivate and bolster the system. Therefore, we must be fair in our criticism while acknowledging the strides made by our education system.

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Appendix

Appendix Table 1. Overall student population, 2000-2018

Overall population	2000	2005	2010	2015	2018
Hebrew, State	805,339	777,910	796,864	902,533	962,440
Hebrew, State-religious	237,680	241,349	262,555	301,511	326,001
Haredi	211,901	273,906	337,364	401,023	441,669
Arab	238,940	301,856	349,261	383,860	387,640
Druze	37,022	39,967	42,325	41,266	40,829
Bedouin	54,590	78,145	96,433	110,870	118,010
Total	1,585,580	1,713,291	1,884,944	2,141,586	2,277,091

Appendix Table 2. Change in overall student population Ratio between time periods

Overall population	2000/2005	2005/2010	2010/2015	2015/2018	2000/2018
Hebrew, State	0.97	1.02	1.13	1.06	1.20
Hebrew, State-religious	1.02	1.09	1.15	1.08	1.37
Haredi	1.29	1.23	1.19	1.10	2.08
Arab	1.26	1.16	1.10	1.10	1.62
Druze	1.08	1.06	0.98	0.99	1.10
Bedouin	1.43	1.23	1.15	1.06	2.16
Total	1.08	1.10	1.14	1.06	1.44

Appendix Table 3. Preschool student population only, 2000-2018

Overall population	2000	2005	2010	2015	2018
Hebrew, State	123,657	120,891	139,515	189,951	203,201
Hebrew, State-religious	48,102	48,791	58,292	76,070	84,301
Haredi	58,263	77,450	93,799	109,925	120,033
Arab	37,550	54,388	60,348	72,805	74,681
Druze	7,449	8,109	8,717	8,512	8,190
Bedouin	9,273	16,317	17,396	21,084	23,419
Total	284,294	325,946	378,067	478,347	513,825

For all 3 tables: Source: Nachum Blass, Taub Center | Data: Ministry of Education, A Broad Perspective

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Appendix Table 4. Primary school teachers, 1999-2018

	(1)	(2)	(3)		Ratio	
School year	1999/2000	2009/2010	2017/2018	(2)/(1)	(3)/(2)	(3)/(1)
Hebrew education						
All teachers	43,426	49,717	63,671	1.14	1.28	1.47
Full-time equivalent posts (FTE)	31,845	38,441	48,867	1.21	1.27	1.53
Average percent of full-time post	73%	77%	77%	1.05	0.99	1.05
Women	89.6%	87.1%	85.8%	0.97	0.99	0.96
Under age 29	18.1%	12.3%	11.9%	0.68	0.97	0.66
Age 50 and older	16.6%	26.5%	25.2%	1.60	0.95	1.52
Academic pay level	49.8%	74.0%	89.1%	1.49	1.20	1.79
Master's pay level	10.9%	19.0%	28.4%	1.74	1.49	2.60
Average weekly work hours	22.6	26.0	26.5	1.15	1.02	1.18
Average years of recognized seniority	14.3	16.1	15.3	1.13	0.95	1.07
Arab education						
All teachers	11,849	17,380	20,881	1.58	1.02	1.90
FTE	8,977	14,582	17,523	1.62	1.20	1.95
Average percent of full-time post	82%	84%	84%	1.03	1.00	1.03
Women	65.0%	74.8%	78.1%	1.15	1.04	1.20
Under age 29	33.4%	23.5%	14.1%	0.70	0.60	0.42
Age 50 and older	8.3%	14.3%	15.9%	1.72	1.11	1.92
Academic pay level	37.3%	79.3%	93.7%	2.13	1.18	2.51
Master's pay level	3.4%	10.4%	23.5%	3.08	2.26	6.95
Average weekly work hours	24.9	28.3	29.5	1.14	1.04	1.19
Average years of recognized seniority	12.5	12.8	14.5	1.02	1.13	1.16

 $Source: Nachum \ Blass, Taub \ Center \mid Data: CBS, \textit{Statistical Abstract of Israel}$

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Appendix Table 5. High school teachers, 199-2018

	(1)	(2)	(3)		Ratio	
School year	1999/2000	2009/2010	2017/2018	(2)/(1)	(3)/(2)	(3)/(1)
Hebrew education						
All teachers	31,293	34,140	41,166	1.09	1.21	1.32
FTE	23,876	26,643	28,748	1.12	1.08	1.20
Average percent of full-time post	76%	78%	70%	1.02	0.89	0.92
Women	68.9%	73.7%	73.2%	1.07	0.99	1.06
Under age 29	9.9%	7.0%	7.4%	0.71	1.06	0.75
Age 50 and older	30.5%	39.7%	37.3%	1.30	0.94	1.22
Academic pay level	73.9%	83.7%	92.2%	1.13	1.10	1.25
Master's pay level	24.5%	38.7%	44.9%	1.58	1.16	1.83
Average weekly work hours	18.3	18.7	25.4	1.02	1.36	1.39
Average years of recognized seniority	18	19.2	18.3	1.07	0.95	1.02
Arab education						
All teachers	4,095	6,597	10,571	1.61	1.60	2.58
FTE	3,932	6,267	8,981	1.59	1.43	2.28
Average percent of full-time post	96%	95%	85%	0.99	0.91	0.89
Women	35.8%	46.0%	56.6%	1.28	1.23	1.58
Under age 29	21.6%	16.2%	17.5%	0.75	1.08	0.81
Age 50 and older	12.2%	19.4%	19.9%	1.59	1.02	1.63
Academic pay level	71.2%	86.3%	92.1%	1.21	1.07	1.29
Master's pay level	14.9%	26.9%	34.8%	1.80	1.29	2.34
Average weekly work hours	23.0	22.8	31.3	0.99	1.37	1.36
Average years of recognized seniority	12.8	13.9	13.3	1.09	0.96	1.04

Source: Nachum Blass, Taub Center | Data: CBS, Statistical Abstract of Israel