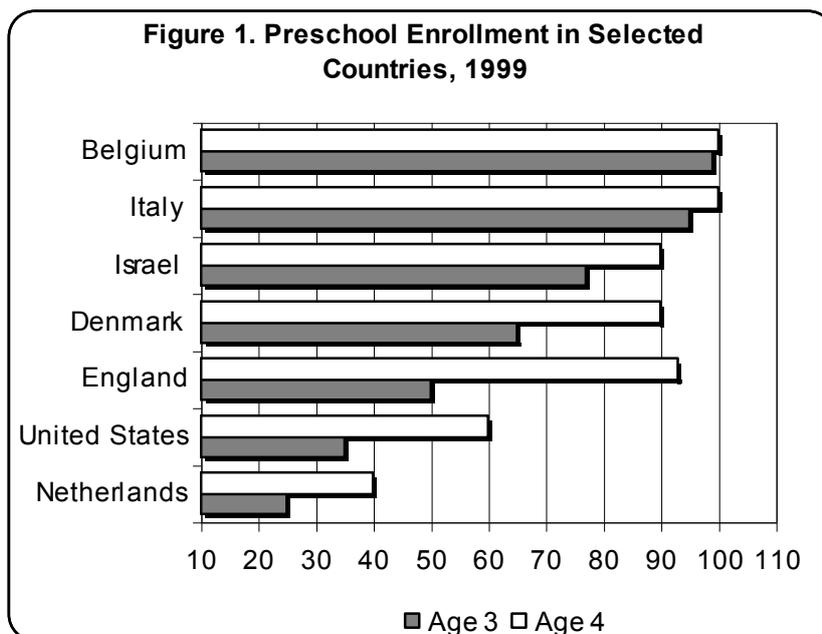

The Education System

This chapter surveys quantitative changes in recent years in the Israeli education system: student population, schools, and teachers. The survey analyzes cross-sections by age in various educational institutions – preschools, primary schools, and post-primary schools – of varying levels and types, as well as post-secondary schools and higher education (colleges and universities). There are additional vertical cross-sectional analyses by sector, differentiating between Jewish and Arab schools and within them by type of school system.

1. Pupils: Main Trends of Development

a. Preschools

Israel is one of the world leaders in terms of the proportion of children enrolled in preschools (see Fig. 1). In 2000, a total of 410,000 children were enrolled in preschools: 350,000 in the Jewish sector and 60,000 in the Arab sector. These figures include private preschools (primarily in the Jewish sector). Pre-primary enrollment rates in the Jewish sector have approached 100 percent in recent years, and therefore fluctuations in the number of Jewish children in preschools in the coming years should correspond to changes in the number of children in the relevant age cohorts. The same is not true of the Arab sector, where there is still considerable potential for increased enrollment.



b. Primary Schools

Enrollment in primary schools totaled 747,000 in 2000, up from 613,000 in 1990. This increase is entirely due to demographic growth – an increase in the size of the relevant age cohort (due to natural increase and immigration); enrollment for this age cohort has long since reached 100 percent.

Total primaryschool enrollment in the Jewish sector was 560,000 pupils (75 percent of all pupils in primary schools), compared with 473,000 a decade earlier (1990). Enrollment in the Jewish sector rose in the 1990s by close to 20 percent (or an average of about 2 percent per year). For the sake of comparison, in the preceding five year period (1985–1990) enrollment rates decreased at an average annual rate of one percent. The current increase can be attributed mainly to the mass immigration that occurred in the 1990s.

Arab primary school enrollment came to 187,000 in 2000. The increase in the pupil population in this sector stands out in comparison with the Jewish sector, as it had remained steady for a long time, almost since the establishment of the State of Israel. The differences between the growth rates of the two sectors has resulted in a major difference in their relative sizes, especially in the 1960s and 1970s and also in the past two decades. As a result, the Arab sector now accounts for more than one-fourth of all primary school students.

Within the Jewish sector, the distribution of pupils by system attests to a new and rapidly evolving process with numerous implications for the future: enrollment in religious schools, and especially *haredi* (ultra-Orthodox) schools, is increasing more rapidly than overall student enrollment.

Table 1. Pupils by Sector and System: Primary Education
(Percent)

	Jewish sector					Arab sector
	Percent of Total	Total	State	State-Religious	Other Religious	Percent of Total
1980	78	100	74	20	6	22
1990	77	100	71	21	8	23
1995	79	100	68	21	10	21
2000	75	100	60	19	20	25

What is interesting in this process is the distribution of immigrant pupils (those who arrived after 1990) by system. One might reasonably assume that most of the immigrant pupils would attend State schools, since most of the immigrants are not religious. Yet it seems that the percentage of immigrants enrolled in State-Religious schools is fairly high – only slightly lower than the percentage for the Jewish sector as a whole: about 16.5 percent in primary schools (2000).

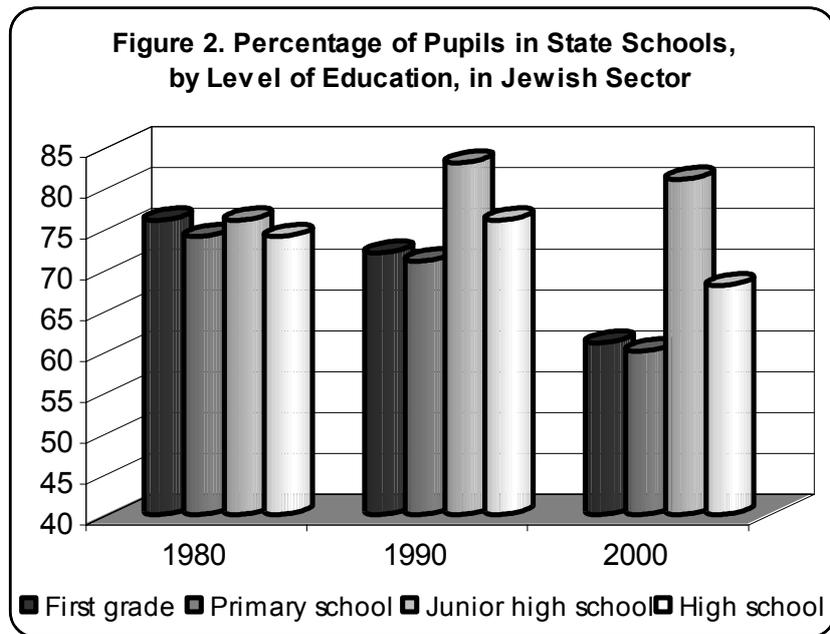
How can this be explained? Two main factors appear to be responsible: one is the large number of children in the Ethiopian community who were directed to State-Religious schools; the other is a rise in the share of immigrants from the Asian republics of the former Soviet Union, who also prefer religious schooling. Although the total number of immigrants from the former Soviet Union is fourteen times that from Ethiopia, the number of children aged 0–14 among them is only five times as large.

c. Post-Primary Schools

There are 574,000 pupils in post primary education, divided into two main types of schools: junior high schools (grades 7–9), which have 243,000 pupils, and senior high schools (grades 10–12), with 331,000 pupils. In localities that do not yet have junior high schools or have not switched over entirely to junior high schools, the high schools still include the ninth grade. As a result, in these localities enrollment in high schools is greater than in junior high schools. In 2000, more than thirty years after the structural reform of postprimary education began, one-fourth of pupils still follow the old organizational pattern, i.e., eight years of primary school and four years of secondary school.

Table 2. Pupils by Sector and System: Post-Primary Education (Percent)

	Jewish sector					Arab sector
	Percent of Total	Total	State	State-Religious	Other Religious	Percent of Total
1980	85	100	74	22	4	15
1990	83	100	76	18	6	17
1995	82	100	73	19	8	18
2000	81	100	68	17	15	19



Three main factors influence the increase in the number of pupils in postprimary schools: natural increase, a continued rise in the enrollment rates, and completion of the above mentioned school reform. With the slowing down of immigration, all three factors have worked to reduce the relative proportion of students in the Jewish State system in over all postprimary education. This process is manifested, on the one hand, in a gradual increase – slower than in primary education, but steady – in the percentage of pupils in the Arab sector. Concurrently, the percentage of pupils in *haredi* schools has risen rapidly in the past five years – from 8 to 15 percent – and their share in primary education is even higher, attesting to additional large waves that can be expected in postprimary education in the coming years. A disparity may remain between primary and

post-primary schools in relative enrollment shares in the different systems, since some children who attended religious primary schools change to State high schools, which offer more varied curriculum.

The dropout rate in postprimary education is a major indicator of the system's success in identifying and influencing the dropout population. The past two decades have seen substantial improvements in preventing pupils from dropping out and in maintaining high enrollment rates. The improvement varied from sector to sector and from one level of education to the next: in the Jewish sector the improvement was greater in the 1980s, whereas in the Arab sector more progress was made in the 1990s.

Table 3. Enrollment per Thousand Population Aged 14–17

	1980	1985	1990	1995	2000
Jewish sector	795	869	905	959	957
Arab sector	513	621	628	673	794

As for the extent of the dropout problem, 21,680 pupils in grades 9–11 dropped out of school between 1999 and 2000 – 6.9 percent of total enrollment in these grades. This rate attests to a continued decline in the overall dropout rate compared with previous years (see Fig. 3).

It should be stressed that the estimates made by the Israeli education system refer to overt dropouts only. Recently, there has been increased awareness of hidden dropouts (pupils who do not attend school regularly, are frequently absent or tardy, make no progress in their studies, and have no interest in school.¹) The dropout rate between 1999 and 2000 is considerably lower in the Jewish sector than in the Arab sector – 5.8 versus 11.9, respectively. Overall, dropout rates in the Arab sector are declining: in the mid-1980s the rates were above 14 percent;

¹ Cohen-Navot, Ellenbogen-Frankovits, and Reinfeld 2001.

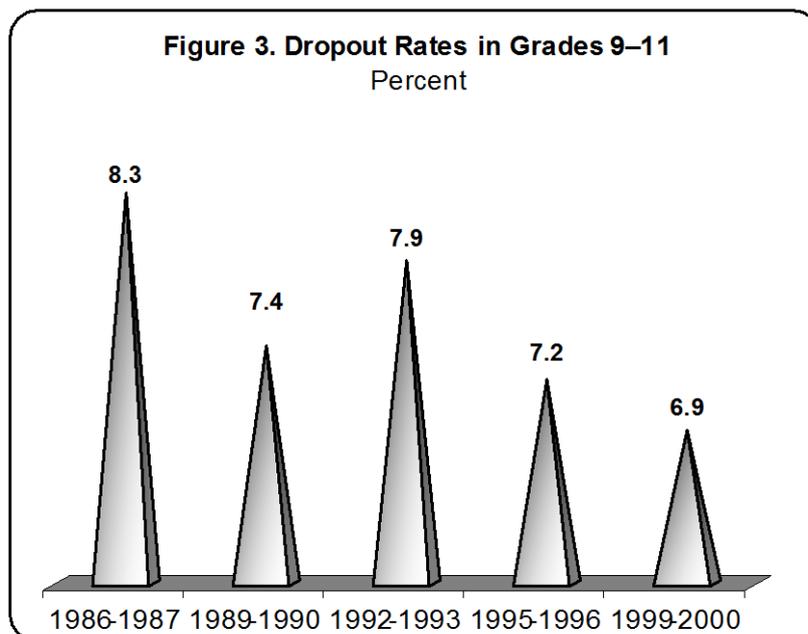
they dropped to around 13 percent in the early 1990s and to about 11 percent in the mid-1990s.

Boys are at greater risk of dropping out in both sectors, with more than twice the rate of girls: in the eleventh grade, for example, the dropout rate for boys in the Jewish sector was 8.6 percent, compared with only 4.8 percent of girls. In the same grade in the Arab sector, the figures are 12.2 and 6.0 percent, respectively (the dropout rates in the Arab sector are higher in grades 9 and 10 than in grade 11).

Certain other groups – for instance, immigrants, especially those who arrived after 1996 – were also found to be at high risk of dropping out. The differences in dropout rates can be seen in Table 4, where the percentage of dropouts is calculated cumulatively on the basis of the specific rates for each grade, as shown in Figure 4.

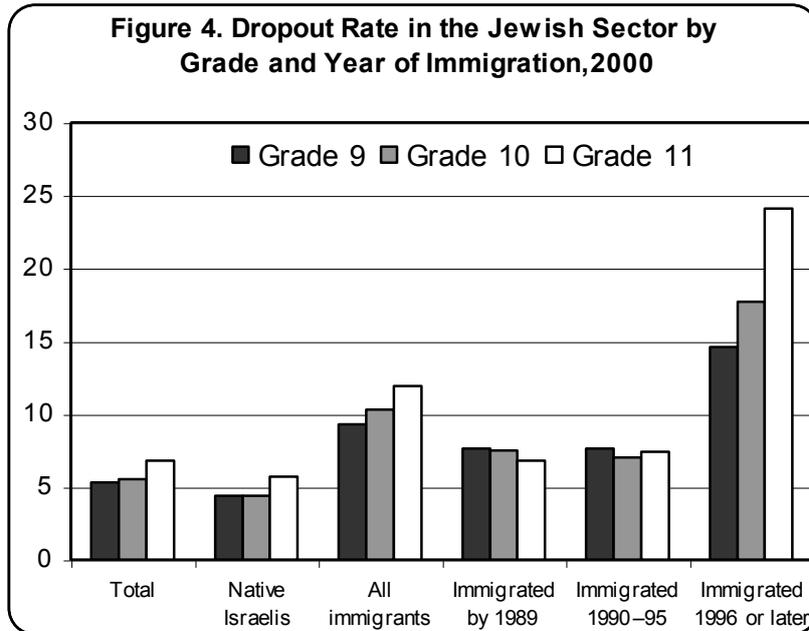
Table 4. Dropout Rate in the Jewish Sector, by Grade (Cumulative) and Year of Immigration
(Percent)

Grade	Total	Israeli-born	All immigrants	Immigrated by 1989	Immigrated 1990–95	Immigrated 1996 or later
Up to grade 9	5.3	4.4	9.3	7.6	7.6	14.6
Up to grade 10	5.4	4.4	9.8	7.5	7.3	16.4
Up to grade 11	5.8	4.8	10.5	7.2	7.3	18.7



The dropout rates among immigrants who arrived in the past five years are extremely high. Nevertheless, the table shows that the rate decreases the longer immigrants have been in Israel. In previous reports, too, dropout rates were found to be disproportionately high among immigrants: a 1999 report on the dropout problem among immigrants who had arrived in 1990 or later found that, in 1996, the dropout rate for this group was 14.1 percent, compared with an average rate of 6.5 percent in the Jewish sector and 10.7 percent in the Arab sector.²

² Of the 30,500 immigrant pupils (who arrived in Israel in 1990 or later), 4,300 dropped out of grades 9–11 in 1996 (CBS 1999). An extremely high percentage of the dropouts have a widowed, divorced, or single mother: 20 percent of such pupils dropped out, versus 11.6 of those with married mothers. Among the immigrants, too, more boys than girls drop out.



The fact that the dropout problem is focused clearly on certain sectors should be of concern to Israeli educators, especially in view of social expectations regarding the role of the education system in reducing disparities in Israeli society.

The situation among the immigrants is undoubtedly related to their financial status in their first years in Israel, difficulties integrating in school due to language, and additional difficulties stemming from other problems, such as the large number of immigrant pupils coming from single-parent families. Some of the dropouts probably enroll in alternative frameworks not run by the Ministry of Education, primarily vocational schools run by the Ministry of Labor and Social Affairs and apprenticeship schools. In reports on the dropout rate, these young people are

included as dropouts.³ Furthermore, there may very well be differences between immigrants from different countries of origin, and within the groups of immigrants attention should be focused on pupils accordingly. A countrywide survey of teenagers from the Caucasus, for example, reported particularly worrisome dropout rates.⁴

2. Improved Performance on Matriculation Exams

The Ministry of Education devotes vast resources to ensuring that as many pupils as possible take and pass the matriculation exams. Table 5 shows a steady increase in the rates of those eligible for matriculation over the past twenty years.⁵ Nevertheless, further efforts are needed to raise the eligibility rate. A recent study indicates that some segments of the population are achieving eligibility rates of close to 90 percent. In other words, target success rates of 80 and even 90 percent on the matriculation exams can be set.⁶

³ There have been 15,000–16,000 such pupils in recent years. See Cohen-Navot, Ellenbogen-Frankovits, and Reinfeld 2001, research report on dropouts.

⁴ Ellenbogen-Frankovits and Noam 1998.

⁵ The figures in this section are based mainly on a publication by the Department of Education and Welfare Services in the Ministry of Education (Levy 2001).

⁶ Dahan et al. 2001.

Table 5. Pupils, Examinees, and Pupils Eligible for Matriculation Certifications (Percent)

	1980	1990	2000
Age cohort (thousands)	65.5	85.0	107.8
Percent			
Total age cohort	100.0	100.0	100.0
<i>Thereof:</i> Pupils	54.2	71.8	77.9
Examinees	–	51.8	68.1
Eligible	21.3	30.7	40.8
Relevant age cohort ⁷	92.0	91.0	89.9
<i>Thereof:</i> Pupils	59.0	80.1	85.9
Examinees	–	57.5	72.2
Eligible	23.3	34.9	44.4

The improvement is quite significant given several characteristics of the (potential) candidates for the certificates: first, only about 90 percent of this age cohort are actually candidates for the matriculation exams. This is due to the fact that the cohort includes about 8,000 *haredim* who do not take matriculation exams, and more than 4,000 youngsters from East Jerusalem who are not in the Israeli school system. It should be stressed that the proportion of these two groups in the cohort has increased over the years, with the proportion of the *haredim* rising especially rapidly, as noted previously. Hence, the true eligibility rate is even higher than reflected in the official data, and its rate of increase is even greater.⁸

A second factor is that an increasing percentage of students who did not pass most of the exams when they finished the twelfth grade, did so within a few years of completing school. If we add the more than 2,000 people who earn certificates through

⁷ For explanation see text.

⁸ It is worth investigating whether the slight decline in the percentage of students passing the matriculation exams between 1999 and 2000 has to do with the increase in the percentage of students in haredi schools.

“external” examinations, then close to 50 percent of the relevant graduating class will eventually be eligible for matriculation certificates.⁹

Education Ministry reports on the number of pupils who took a portion of the exams but did not qualify for full certificates indicate an increasing number of potential eligibles in the age cohort. The Education Ministry reports divide the examinees into four categories: full eligibility; near eligibility- level A (only one subject short of earning a certificate); near eligibility-level B (passed tests for at least 14 credits but not included in level A); and the rest.

Table 6. Matriculation Exam-Takers, by Level of Eligibility
(Percent)

	1994	1995	1997	1999	2000
Age cohort*	100.0	100.0	100.0	100.0	100.0
Students	74.6	75.3	78.2	79.9	77.9
Examinees	60.4	61.2	65.2	69.1	68.1
Fully Eligible	34.0	37.9	37.7	41.4	40.8
Level A Eligibility**	3.7	4.1	5.5	7.7	7.4
Level B Eligibility	12.4	12.1	10.5	8.4	7.6
Other	10.3	7.1	11.4	11.6	12.4

* This table includes the entire age cohort, and not only the “relevant age cohort,” as shown in the previous table.

** Level A: near eligibility, only one subject short of earning a certificate
Level B: near eligibility, passed tests for at least 14 credits but not included in level A Other: everyone else

If we assume that the pupils who passed all but one matriculation exam will eventually pass the full exam, and if we further assume that half the students on eligibility level B and 10 percent of the others will pass the exams, then close to 55 percent of the 2000 graduating class will have earned

⁹ See CBS special publications 1129 and 1115.

matriculation certificates within a few years. The increase in the share of level A at the expense of level B means that growing percentages of graduating students will earn matriculation certificates in the future. If we take into account what has been said regarding the true relevant student population, then the percentage of eligibles among the graduating class will approach 60 percent.

a. The Quality of Matriculation Certificates

The rise in the number of examinees as a percentage of the relevant age group indicates a major achievement of the high schools and attests to the quality of their educational work. In this context, it is worth exploring whether the system's work on increasing the percentage of matriculation eligibles was accompanied by a lowering of academic standards. This claim has been voiced more than once as an objection to efforts to increase the percentage of eligibles and to changes in the number of exams and their ranking by level of difficulty. To clarify the matter, a comprehensive study would have to be conducted, and as far as is known, none has been done. Nevertheless, we shall try to point to several statistics and developments that indicate that the rise in eligibility rates was not accompanied by a corresponding decline in examination standards:

1. There was an increase in the percentage of exams passed by those who met the admission requirements for higher education, as manifested in credits and test scores (see Table 7). The average number of credits and the percentage of examinees who took exams for more than 31 credits also rose; in other words, the number of students pursuing a broader range of studies is increasing. It should be stressed that the increase in the number of examinees has come in large part from the lower socioeconomic classes, since the

eligibility rates among the higher socioeconomic groups were already high.

2. The decrease over the years in the percentage of applicants for first-year university studies who are rejected does not indicate a decline in the academic level of applicants for higher education, unless the universities lowered their admissions standards without acknowledging it.¹⁰
3. In recent years, a somewhat higher percentage of pupils have taken and passed the exams in math, as an example of one of the "hard subjects." More relevant, however, is the increase in the percentage achieving particularly high scores on these exams, from 19.5 to 23.5. Among the five-credit students, the percentage of examinees passing the exam with particularly high scores has hardly changed.

Table 7. Matriculation-Eligibles Whose Results Qualify Them for Higher Education

	Eligible Students (absolute numbers)	Met the minimum requirements (%)	Average credits	Persons eligible by no. of credits (%)			
				20–25	26–28	29–30	31+
1995	37,948	83.1	27.1	38.2	27.0	17.6	17.3
1996	38,537	83.1	27.2	36.9	27.2	17.5	18.4
1997	38,124	86.2	27.3	36.3	26.2	18.3	19.2
1998	39,892	87.3	27.4	34.8	27.0	18.4	19.8
1999	43,120	86.7	27.5	33.5	27.8	18.6	20.1
2000	43,974	86.2	27.5	33.6	27.7	17.8	20.9

¹⁰ It is, of course, possible that, due to the large number of options today (colleges, foreign university extensions, etc.), students who do not expect to be accepted do not apply to universities in the first place. But this argument is largely negated by the large number of applicants to the universities.

Table 8. Percent of Age Cohort Taking, Passing, and Achieving Particularly High Scores on the Math Exam

	1995	1996	1997	1998	1999	2000
Age cohort	100.1	99.4	101.1	103.7	104.2	107.8
(thousands)						
(Percent)	100.0	100.0	100.0	100.0	100.0	100.0
Math:						
Took the test	51.9	52.0	49.1	50.0	54.6	53.6
Passed	46.5	52.4	43.4	45.1	49.5	48.9
Scored high	19.5	18.7	18.1	20.4	23.2	23.5
Five credits						
Took the test	9.2	9.2	8.9	8.6	9.4	9.1
Passed	9.0	8.8	8.5	8.3	9.0	8.8
Scored high	5.2	4.1	4.2	4.8	5.0	5.2

b. Matriculation Eligibility, by Traits of Students

The increase in the matriculation eligibility rate is worth examining according to the composition of the student population. Disparities in achievement between sectors and ethnic groups have characterized Israeli society over the years, and the subject has been discussed extensively by professionals and decision-makers.

The disparities in achievements between the **Jewish and Arab sectors** are enormous. It should be noted, however, that the Arab sector has made progress in recent years, both in enrollment rates and in rates of taking and passing the matriculation exams. Also, the Arab sector is not homogeneous; within it there are differences in achievements between the Bedouin, the Druze, Muslim Arab, and Christian Arab students.

Table 9. Enrollment and Matriculation Eligibility in the Arab, Bedouin, and Druze Sector (Percent)

		1994	2000	% change 1994–2000
Arabs	Enrollment	55.5	71.2	28.3
	Matriculation eligibility	18.8	29.0	54.3
Bedouin	Enrollment	31.8	62.8	97.5
	Matriculation eligibility	5.1	16.8	229.4
Druze	Enrollment	61.2	79.8	30.4
	Matriculation eligibility	21.4	28.6	33.6

During the past decade, enrollment rates in the Arab sector rose substantially, to more than 70 percent, but matriculation-eligibility rates are still quite low. As in the Jewish sector, some students in the Arab sector who do not earn a matriculation certificate at the end of twelfth grade pass the exams within the next few years. However, the percentage of Arab students who complete the matriculation exams in the seven years after high-school graduation is lower than the percentage of Jewish students who do so (even though most of the former do not serve in the army).

As for the quality of the matriculation certificates, the following table shows the percentage of graduates, by sector, whose matriculation certificates qualify them for admission to universities. Clearly, a great deal of work is needed to improve performance in order to make matriculation scores an admission ticket to advanced study for graduates in all sectors.

Table 10. Matriculation Eligibility Qualifying Students for Higher Education, by Sector (Percent)

	Jews	Arabs	Bedouin	Druze
1995	85.1	67.2	42.1	64.5
2000	88.6	70.4	38.4	66.0

Within the Jewish sector, there are still major differences **by ethnic group**, although progress has been made over the years in the eligibility rate of students of Asian and African origin. This progress has been more rapid than among students of European and American origin.¹¹ Table 11 shows the differences in rates of progress in recent years by ethnic group:¹²

The ethnic gap in terms of achievement on the matriculation exams is even more apparent if we look at the quality of the certificate earned. In 1996, for example, students of Asian and African origin received the highest median score in only one of thirty-two exam subjects. In three other subjects they scored between the students of Israeli and the European- and American-origin. In the other twenty-eight subjects, students of Asian and African origin scored lower, with the differences being fairly large. We see, then, that despite the great progress made by students of Asian and African origin in terms of the percentage who take and pass the tests, the disparities remain significant and to reduce them much work remains to be done.

¹¹ In comparing students of Asian or African origin with second- and third-generation native Israelis, a few comments are important: First, the proportion of native Israelis whose fathers were also born in Israel is rising rapidly, but there is evidence that the academic disparities between different Jewish ethnic groups remain even in the third generation. Second, there is a substantial difference between the socioeconomic profiles of the different ethnic groups today and the profiles of these groups before the inclusion of the immigrants from the former Soviet Union. This is manifested in a decrease in the socioeconomic disparity between the different ethnic groups.

¹² There is also evidence that the ethnic gap widens the longer people have been in Israel. See Dahan et al. 2001. The results obtained by Dahan and his colleagues can be interpreted in various ways. For instance, one might assert that third-generation Israeli students of Asian or African origin also come from particularly weak socioeconomic backgrounds. This is corroborated to a large extent by Dahan's study.

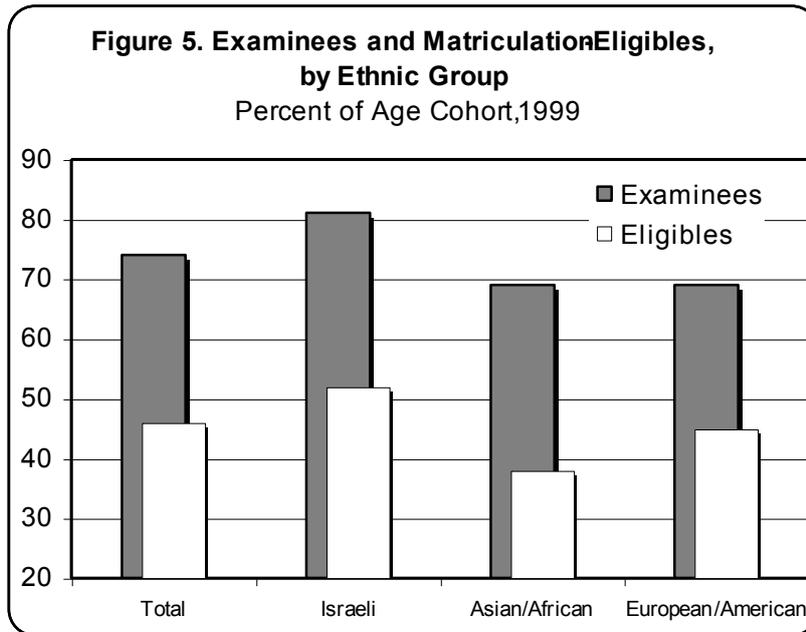


Table 11. Examinees and Matriculation-Eligibles in the Jewish Sector, by Ethnic Group (Percent)

	1991	1994	1996	1998	1999
Examinees as % of age cohort					
Total	57	67	72	70	74
Israeli	74	73	76	81	81
Asian/African	53	62	68	63	69
European/American	65	69	75	62	69
Matriculation-eligibles as % of age cohort					
Total	37	40	45	43	46
Israeli	53	45	49	51	52
Asian/African	29	31	37	34	38
European/American	46	45	51	40	45

Comparisons of achievement levels on the matriculation exams **by school system** are limited to State versus State-Religious schools in the Jewish sector (since the Independent *haredi* sector does not prepare its students for the matriculation exams). In this context, one of the most interesting findings has to do with the higher pass rates among students in State-Religious schools. These students, who, in general, come from lower socioeconomic backgrounds, spend more hours in school. Also, a higher percentage of them take the exams and a higher percentage earn matriculation certificates (almost 60 percent in State-Religious schools versus about 55 percent in State schools).

Table 12. Matriculation-Eligibles as a Percentage of Examinees, by Sub-System

Year	State	State-Religious	Arab
1989	62.0	56.4	45.5
1995	67.5	68.8	49.4
1997	65.5	66.6	49.2
2000	65.1	69.0	51.7

Why is the State-Religious system more successful at overcoming the initial obstacle of the students' socioeconomic background? There may be several reasons:

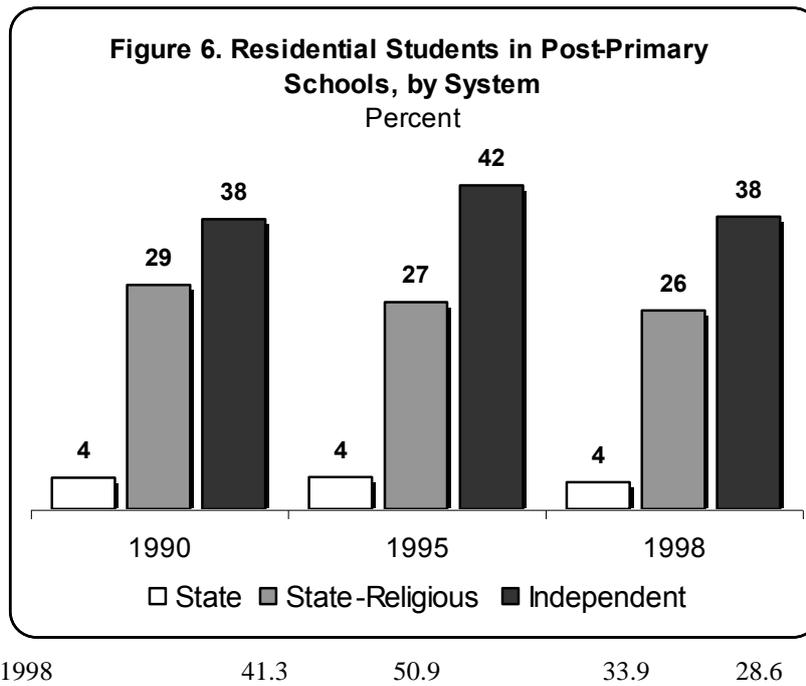
First, the percentage of students who remain in the system is lower in the State-Religious system than in the State system. Perhaps some of the students in State-Religious schools (the weak ones, or those uninterested in earning a matriculation certificate) leave the State-Religious system and transfer to State or Independent (*haredi*) schools.

Second, State-Religious schools place more of their students in the academic track, in which the program of study in preparation for the matriculation exams is more intensive. State-Religious schools also tend, more sweepingly than State schools, to transfer students from the technological track to the academic track shortly before the matriculation exams. This

enables them to budget students who are really in academic programs as if they were in technological courses of study, thereby obtaining more funding.

Table 13. Percentage of Students in Post-Primary Technological Education, by Sub-Sector

	Total	State	State-Religious	Arab
1990	45.4	52.9	47.3	21.7
1995	42.6	51.4	35.4	27.8



A third explanation has to do with the high percentage of residential students in the State-Religious system. The residential setting no doubt helps prepare the students for the matriculation exams.

In this context, it is worth noting that supplementary data regarding the level of the exams show differences between the two systems in terms of the percentage of graduates who earn certificates qualifying them for university admission. Here, too, the State-Religious system has made great progress and the gap between the two systems is narrowing.

Table 14. Matriculation Eligibility Qualifying Students for University Studies, by System (Percent)

	State	State-Religious
1995	89.0	70.2
2000	91.1	81.9

3. Expansion of Higher Education: Ramifications for Social Inequality

The higher education system in Israel encompasses students in universities, other Israeli degree-granting institutions, and extensions of foreign universities. This system has been changing rapidly in recent years, with several notable trends: enrollment in all post-secondary and academic institutions has risen, and with this, changes have occurred in the participation rates of various segments of Israeli society in higher education. Furthermore, diversity in institutions of higher education has increased.