ATTRACTING, DEVELOPING AND RETAINING EFFECTIVE TEACHERS

IN ISRAEL

OECD COUNTRY BACKGROUND REPORT

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PREFACE

This report was written as part of the OECD activity on attracting, developing and retaining effective teachers. It is one of 23 other similar reports written by representatives of countries participating in this activity.

The activity was carried out in Israel on behalf of the chief scientist's bureau at the Ministry of Education by a team from the School of Education at Tel-Aviv University. It was conducted under the guidance of a steering committee, appointed by the chief scientist, whose members represented several departments dealing with the teaching workforce at the Ministry and at the Central Bureau of Statistics as well as representatives of colleges of education, universities and teacher unions. The activity mainly consisted of collecting and merging data from various sources including statistical data, descriptive data regarding policy initiatives and research data concerning the extent to which these policies were successful.

The report was written in line with detailed guidelines provided by the OECD in a document published on March 3, 2002 entitled "Design and Implementation Plan for the Activity". This background report describes the state of affairs in Israel until March 2003 and does not relate, for instance, to the economic reform recently announced by the Israeli government and its ramifications for the educational system.

STEERING COMMITTEE

EXECUTIVE SUMMARY

The context

Israel, which has been in existence for 55 years, was established to realize the right of the Jewish people for a national homeland. Its population consists mostly of Jewish people who immigrated after Independence in two immigrations waves during the 1950s and 1990s. Today, its population exceeds 6.5 million people 78% of whom are Jews comprising 37% of the world-wide Jewish population. The rest of its citizens are Arab Muslims, Christians and Druze. The annual rate of growth in the Jewish population is lower than that of the Arab population.

Economically, Israel is a welfare state that is going through processes of deregulation and privatization in an attempt to integrate into the world markets. Since 1996 and more so since the Intifada, i.e., the Palestinian uprising, which began in October 2000, Israel is in a state of recession and undergoing an economic depression accompanied by increasing unemployment, with the share of government in welfare services constantly on the decline. In April 2003 a much debated new economic plan was authorized by the government. It aims to downsize salaried employees in the public sector; to increase pension contributions of both workers and employers; to postpone the age of retirement; to privatize state-owned companies and to reduce the budget allocated to different governmental administrations. This program has severe consequences for education including cutbacks in study hours, growth in the number of students per class and cuts in many activities designated for pupils. By now, about 2000 teachers, all working in the public sector, have already been fired or forced to go into early retirement. In addition, the budgets of teacher education institutions were reduced as well as their student quota and several study tracks in teacher education were cancelled.

This country background report was written prior to the full implementation of the above new economic plan and the most recent economic edicts imposed by the government, which are to be put into practice in 2003/2004.

In the year 2001/2, the number of students in the educational system, from pre-primary to upper-secondary level, exceeded 1.65 million. During the past decade, enrollment rates increased in all levels of education: about 17% increase in the pre-primary level, 21% in the primary level and 43% in the post-primary level. This growth reflects the annual population growth rate of 2-17 years olds, which reaches 1.8% in the Jewish sector and 2.7% in the Arab sector as well as the growth in number of students attending schools, which surpasses 95% in all levels of education excluding upper-primary education in which enrollment rates reach 92% at the age of 16 and 85% at the age of 17. School enrollment rates are higher in the Hebrew-speaking sector than in the Arabic-speaking sector but the gaps between these two sectors are diminishing.

In the year 2001/2, 125,000 teachers were teaching in all levels of education. In the past decade, the growth in number of teachers exceeded that of students, a trend that was more prominent in the Arab sector. As a result there was a decline in the number of students per teacher (FTP, full time teaching post) and an increase in the ratio of teachers per working units (i.e., many teachers work part time only). Even when taking into consideration forecasts of population growth as well as growth in enrollment rates for the years

2006/2007, it seems that the predicted growth in the number of teachers will satisfy the need for teachers in the educational system.

This situation seems to lead policy makers to set other priorities and shift from dealing with problems of quantity to dealing with problems of teachers' quality. Of these problems, this summary will deal with the following:

- The composition of the existing workforce;
- The teaching profession, its prestige, working conditions and professional development opportunities;
- The volume and quality of those studying to be teachers;
- The functioning of the administrative bodies responsible for educating and handling the teaching force.

The composition of the existing workforce

Aging
Data show a constant aging of the teaching workforce during the past decade, mainly in Hebrew upper-primary education. In 1992/93, on every young teacher (i.e., below age 29) in this level of education, there were 1.6 older teachers (over 50), while in 1999/2000, the ratio increased to 2.6 older teachers. A similar phenomenon also can be observed in the Arab sector but here there are still more young teachers than older ones: in 1992/93, on every older teacher in upper-primary education there were 2.5 young teachers, while in 1999/2000, the ratio decreased to 2 young teachers only. Aging of the workforce has its monetary consequences since employing older teachers, who usually have more years of experience, is far more expensive than employing novice teachers. In addition, employing older teachers requires their constant updating concerning new teaching methods usually those involving ICT, which causes an additional financial burden. With the recent raise in the retirement age and the reform in pension conditions, the number of older teachers continuing to work might even grow. The ability to change this situation via financial incentives for early retirees, is limited.

Feminization of the teaching force
Research findings often link feminization with the decline in the occupational prestige of teaching. In Israel, the teaching force is composed mostly of women. Their percentage is higher in primary than in upper-primary education and higher in the Hebrew sector than in the Arab sector. While the percentage of women in Hebrew speaking primary and upper-primary education has remained stable between 1993-2000 (90% and 73% respectively), the percentage of women in the Arab education has grown from 54% to 66% in primary education and from 30% to 38% in upper-primary education during that period. Israel has no policy preferring male candidates for teaching or for administrative roles within schools and data show that the percentage of women holding principal role positions is on the increase.

Unqualified teachers
In Israel, several levels of teaching certification exist. These include regular certification after completing studies in a two-year teacher's seminar, advanced certification on completion of a three-year program or a retraining program for students with academic degrees, and a B.Ed. with a teaching certificate given to those who complete a four-year academic program. In addition to these diplomas, awarded by the Ministry of Education, universities grant their own teaching diplomas. Until recently, teaching licenses were automatically given to graduates receiving the teaching certificate from the teacher training institution.

Lately, however, this link between the certification and licensure processes was cut and now a license is given only to those teachers who have successfully completed an induction year. This was also meant to prevent the entry of university graduates who have no teaching diploma into the system.

Certification requirements increase with the level of education. Nowadays, teaching in primary school and lower-secondary school requires a B.Ed. or a B.A as well as a teaching certificate. Teachers in the upper-secondary school are required to have a second degree in their field of studies and a teaching diploma or, according to a less severe criterion, a first degree in their field of teaching and a teaching diploma.

The Ministry has recently invested numerous efforts to reduce the number of unqualified teachers in the educational system and to encourage teachers to upgrade their certification status and study towards an academic degree. Thus, in 1998/9, a new regulation, according to which certification depends on possessing a BA degree, was mandated. In addition, since 1999/2000, teaching licenses are being granted only after new teachers have successfully completed an induction year. These efforts were fruitful as the number of qualified teachers has increased from 1993 to 2000 both among primary school teachers (from 84% to 92%) and lower-secondary school teachers (from 30% to 75%). During this period there was also a significant increase in the number of teachers holding an academic degree in both the primary level (from 23% to 46%) and in the upper-primary level (from 62% to 75%) with the gaps between Hebrew and Arab education diminishing in terms of the percentage of teachers holding academic degrees.

Nonetheless, in the upper-secondary school level, where teachers can be recruited directly by the school principals and not via the Ministry of Education, many teachers are regarded actually unqualified since they do not hold a teaching certificate even though they do have an academic degree. The percentage of teachers in the upper-secondary level who meet the rigorous requirement of holding both a second degree in the field of studies and a teaching diploma, reached only 24% in 2001/2. Even when adopting a less severe criterion, i.e., a first degree in the field of studies and a teaching diploma, the percentage of teachers regarded as qualified ranges from 40% to 70%, depending on the subject matter. The most problematic subject matters in this respect are computers and technology due to teacher shortage in these areas.

The teaching profession, its prestige, working conditions, and professional development opportunities

Among the factors that can turn an occupation into an attractive one, are occupational prestige, salary and its structure, opportunities for professional advancement and growth, and working conditions. From all these aspects the teaching profession in Israel in not attractive and its appeal has been in decline over the years.

The occupational prestige of teaching

The occupational prestige of teaching has been dropping steadily during the past decades, falling from the top of the semi-professional ladder to middle position since the 1970s. The slump continued even though teachers' salaries were slightly improved, certification requirements were tightened, the study period was prolonged and an academic degree was required for certification. Among the factors that were associated with this decline, researchers point to the low or average socioeconomic status of student teachers, the huge numbers of teachers, the entrance of more prestigious administrative and pedagogical experts into schools, the large percentage of women teachers and the fact that the teaching clientele is young. During the 1990s, an attempt to raise teachers' status via a massive public-relations campaign has failed. Recent publications on the decline in Israeli student achievement, in both nationwide and worldwide examinations, seem to have caused the prestige of teaching to drop even further; choosing a teaching career continues to be, for many people, a default option or an "insurance" plan.

Salary and salary structure of teachers in Israel

The educational sector is one of the largest in the Israeli labor market and makes up 12.6% of the civil workforce. The average wage of a salaried employee in education is 81% of the average wage of other salaried employees in Israel. In comparison with similar liberal occupations (e.g., nurses, social workers, psychologists), the average salary of teachers is the lowest. An additional problem in this respect stems from teachers' salary scale being the same scale for all teachers in all levels of education. Salary ranks are only determined by teachers' level of education and years of experience. Salaries compensate neither for initiatives nor for excellence. After 15 years of work, all salary ranks increase by 57%, whereas after 36 years of experience, which is the maximum number of years that could be gained by teachers, salaries increase by an additional 57%. Salary ranks exist only for teacher educators at teachers colleges by an agreement signed by the Treasury, Ministry of Education and teachers unions: there exist four salary ranks based on several criteria including excellence in teaching, educational initiatives, learning materials development, and academic publications. These criteria indicate direction which is now though of as a basis for career ladders for all teachers.

In an attempt to compensate teachers for the non differential pay scales, the educational system tends to reduce the number of teaching hours for teachers in higher levels of education. Thus, the apparent policy links between an improved salary and a reduction in working hours and no message is transmitted to the teachers connecting between an improved salary and excellence in teaching or effort investment.

Since salaries are the single largest factor in the cost of providing education (90%) and since, of this share, teachers' salaries account for about 75% of this expenditure, teachers' salaries are unlikely to change. In order to solve this problem, a system of monetary incentives was created awarding teachers who hold various administrative roles within their schools. However, except for school principals whose salary benefits significantly from this reward, all other incentives are small, improving teachers' salaries by 2%-10%. The only incentive system that significantly improves teachers' salary by up to 30% of the basic salary is awarded to those who pursue on-going professional development. This encourages many teachers (85%) to participate in various in-service training activities.

An additional, and uncommon, type of monetary reward is given to experienced and highly qualified teachers who are willing to teach in national priority regions, usually geographically peripheral ones. In a limited number of cases, teachers may also be offered to work under generous personal contracts. But this option has met with strong objections from teachers unions who demand adherence to collective salary agreements. Thus, in 1997 only 22% of the allowed quota for personal contacts was used.

Teachers' career structure and promotion

The teaching profession lacks any career ladder and except for very few management roles such as school principals and supervisors. Most of the teachers (84-93%) are appointed as either regular disciplinary teachers or homeroom teachers. Even though many teachers do hold other roles apart from teaching within their schools (about 50% of the teachers), these roles are not formally defined and are, thus, neither rewarded nor accounted for when teachers transfer from one school to another. Despite numerous research findings showing how career promotion and holding additional roles leads to higher degrees of satisfaction, lower levels of burnout and a lower tendency to leave the profession, the many recommendations calling for a reform in teachers' career structure have so far not been realized.

Opportunities for professional development of teachers

The common belief, according to which the teaching profession involves a life-long process of learning, has led the Ministry of Education to perceive teachers' professional development as a continuum, starting with pre-service training and an induction year, and continuing with in-service training activities through teachers' whole career. In the past decade, actions have been taken to improve each of these stages: pre-

service training underwent an academization process, beginning teachers were mentored in their initial stages, an induction year was implemented and practicing teachers were offered a large variety of opportunities for professional development. Some of the in-service training courses are initiated by the Ministry of Education, which aims mostly at implementing innovations and instigating policy guidelines and preparing teachers for administrative roles. Other in-service courses are school-based initiatives, aiming to promote the goals of the school. There are also personal in-service activities intended mainly for teachers' enrichment and higher studies according to their needs and desires. As mentioned before, all professional activities award teachers with credits that translate into monetary benefits. Data from 1999 show that, almost all teachers in the educational system (110,000) participated in 13,000 in-service courses with an annual average of 150 hours for each participant.

Workload and school atmosphere
Teachers' working conditions depend on actual work-load as well as the physical and psychological conditions within which they operate. These determine, to a large extent, the level of teachers' burnout, the probability of leaving the teaching profession and the frequency of absences from work.

Teaching workload
Teaching workload is a function of the number of hours of a full teaching position, number of classes taught, number of pupils per class and the ratio between the number of pupils and actual number of teaching positions. In comparison with teachers in other countries, (OECD Indicators, 2002) the situation in Israel regarding these factors is mixed. Teachers' full time working unit in primary school is 30 weekly hours and 24 hours in secondary school. In other words, the total annual number of hours of a full time teaching position in upper-primary school in Israel reaches 992 hours with a primary teacher teaching 25% more hours than secondary teachers. These figures place Israel among countries such as the USA and Mexico, in which upper-primary teachers work many hours. It also places Israel among countries such as the Netherlands, Scotland and New Zealand in which primary teachers are overworked.

Teaching workload is also measured in terms of class density and pupil/teachers ratio per class. In Israel, the average number of students per class is 27 in Hebrew education and 29 in Arab education with lower-secondary classes being the most populated in both sectors. These figures place Israel with a small number of other countries such as Mexico, Turkey and Korea, which also have densely populated classes (OECD Indicators, 2002).

But there are other measures that do not necessarily point towards a heavy workload. The average number of students per actual teaching position is not high and has been dropping between 1993 and 2000 (at the primary level from 13 to 12 students per actual teaching position and at the upper-primary level from 10 to 9), both in the Arab and Hebrew sectors. These data are difficult to compare with other OECD countries since their data relate to the ratio between numbers of pupils and full FTP. However, the small numbers speak for themselves.

In addition, the average number of weekly hours in education is 25, which is relatively low compared to 36 weekly hours in all other professions and to 32 weekly hours for employees in similar occupations, such as health and welfare services. However, teachers' workload is also affected by numerous daily, unpaid non-teaching duties such as lesson planning and preparation, homework and test checking, along with many additional hours devoted to staff meetings, conferences with parents etc.

The ecology of teachers' work – school climate
School atmosphere is influenced, to a large extent, by the interrelations among all partners within the educational practice including teachers, parents, school principals and students. In a survey conducted in 1997, it was found that only a quarter of all teachers report on having a satisfactory relationship with their

students, with the lowest rate of satisfaction found among lower-secondary school teachers (10%) in comparison with primary and upper-secondary school teachers (60% in both) (Schild, 1997). Data on an increase in school violence, including violence against teachers, were collected by different sources, including local and international studies. According to TIMSS-1999, 60% of all Israeli students report on weekly frequency of class disturbance compared to an international average of only 34%. In another survey, conducted recently by the teachers union, violence and discipline problems were mentioned by 74% of all teachers as the most cardinal problems they face. Furthermore, 64% of all teachers, mainly kindergarten and upper-primary teachers claimed they do not have sufficient knowledge or means to encounter discipline problems, misconduct and violence. Amongst the causes of violence, teachers pointed out the lack of parental authority (41%), lack of means for sanctions and punishment within schools (28%), and parents' low esteem of teachers (14%) (Smith & Pniel, 2003). According to an international survey, only 8% reported on violent behavior on a weekly or daily basis compared to an international average of 4% (TIMSS-1999, 2000a, 2000b).

Teachers' burnout

An accumulation of factors such as teaching workload, violence and lack of discipline in schools bring about burnout phenomena, mostly of teachers in the lower levels of education and mostly among those who do not hold roles other than teaching. Burnout most often results in a tendency to leave the profession. A quarter of all teachers leave their teaching position. These include teachers who are leaving the educational system on a permanent basis or temporarily as well as those who move from one school to another. Of these, those who permanently leave the teaching profession reach 38% at the primary level and 46% at the upper-primary level. Another common phenomenon, related to teachers' burnout, in the Israeli educational system is that of early retirement, i.e., before the age of 60, with percentages ranging from 60% - 70% of all retirees.

A very severe problem attributed to teachers' burnout is teachers' absences from work. The percentage of temporary absentees is 31% with an average monthly absence of 15-17 weekly hours, which equals four working days per month. Absent teachers are mainly those working heavy teaching loads such as homeroom teachers, those teaching in large schools, teachers with families, teachers with low salaries and teachers who do not hold other roles in schools. This phenomenon of teachers' absences was condemned by the State Comptroller, but so far no measures were taken against it.

Summing up the above findings about the prestige of the teaching profession, salary, career structure and working conditions, it is clear that without a substantial change in all these factors it will be hard to change the quality of the teaching workforce.

The volume and quality of those applying for teaching

In contrast with data presented earlier regarding saturation in the teaching market, there has been a constant increase in the number of students applying to teacher colleges during the last 10 years: from 12,000 in 1990 to 34,000 in 2002. The number of students applying for teaching diploma at the university during that period remained stable ranging from 1,000 to 1,300 a year. The numbers of those who were accepted as first year students at the universities and colleges has also increased from 7,000 in 1995 to 10,000 in 2001. Most of these students, as already noted, enrolled in the colleges (on every student training to become a teacher at the university, there are seven at the seminars and teachers colleges). The percentage of teaching students enrolled in ultra-orthodox seminars has increase in the past six years from 17% in 1995 to 27% in 2001.

According to the Ben-Peretz Committee (2001), which was the last committee appointed to deal with teacher education problems; about 6,000 teachers leave the educational system every year for various

reasons including sabbaticals, retirements, etc. Thus, 6,000 new teachers annually are needed (5,000 from teachers colleges and 1,000 from universities). Taking into consideration the low attrition rates of students studying in teacher colleges and universities, and the low percentages of those who integrate into the workforce later on, which ranged until 1994 between 60% and 80% and from 1995 onwards between 28%-54% only, it seems that the existing quota of students in teacher education institution are sufficient and that there is no need to increase them or to add new teacher education institutions. There is also no need to extend the permission to grant teaching diplomas to new institutions in addition to those that do exist today.

Data on the numerous colleges, their size and geographical dispersion justify the merging of existing institutions. Steps in this direction were recently made. Yet, suggestions for full deregulation in the field of teacher education according to free market demands (Klein 2002) were not adopted.

Teachers' quality is one of the main problems that teacher education is facing. Several studies, among them one that compared socio-demographic and academic characteristics of students studying in teacher education colleges and universities with those of other students at the universities who do not study to become teachers, show high ratios of students from Middle-Eastern origin, from peripheral towns, and from religious and traditional background among those who study in teacher colleges as compared with those studying to become teachers in universities, and as compared to university students who do not study to become teachers. These characteristics are usually linked with low academic attainment. Indeed, the academic profile of those students who entered teachers colleges was found to be lower than that of students studying at the universities. Moreover, the mean grade of admission tests among those student teachers who integrated into the teaching profession was found to be even lower than the mean grade found among those who graduated but did not integrate into the profession. These data show that the bulk of students who turn to teaching, and among them those who integrate at work, are not among the elite of students in higher educational institutions. These data have remained constant during the last years. It seems that colleges of education are used as a route for higher education for those with a lower admission profile, and also for the religious and ultra –orthodox, who, for religious reasons do not wish to go to secular higher educational institutions. Moreover, colleges of education are used as a route to vocational education for students coming from a low socio-economic background who wish to integrate as easily and as quickly as possible into the workforce, and for whom the teaching profession offers the shortest path toward tenure, as it is obtained after three years only.

In an attempt to improve the quality of those applying for teacher education preparation, several policy lines were implemented. The most important of these was the academization of teacher education institutions, through which 27 of 52 colleges became academic institutions. The past decade has shown an increase in the percentage of students studying for a B.Ed.; currently, this percentage amounts to 73% of all students studying in teachers colleges of education and seminars. Another step taken in order to improve the teachers' quality, which is however, only in its early stages, is the opening of M.Ed. tracks at teacher education colleges, so far at six teacher colleges only. Also, admission requirements for teacher education program in teacher colleges have been upgraded. This seems to have been a successful initiative: from its first implementation in 1997, the percentage of students with relatively high admission scores increased from 38% to 44%, in 2003. Yet, it is still too early to determine whether these steps will not be at the expense of the colleges due to a possible decrease in the number of applicants for teacher education.

A further attempt to prove the quality of teachers is to scout for high quality students. A one-year retraining program for people holding an academic degree was offered as well as new, short and challenging learning tracks for excellent students. These programs have become very popular, with the number of participants reaching 813, in 2002. Another approach, which was also recommended by the Ben-Peretz Committee and

is currently being implemented, is encouraging high-quality candidates by awarding them unconditional scholarships.

The functioning of administrative bodies responsible for educating and handling the teaching force

The report of the Ben-Peretz committee exposed many deficiencies in the administrative work of the department dealing with teacher education and managing the teacher workforce. Deficiencies stem from the absence of one central system that deals with all aspects of planning, developing and budgeting the teaching workforce. Indeed, in the process of writing this report, some of these deficiencies were exposed.

Among the deficiencies mentioned in the committee's report are:

- Lack of communication between the various administrations, including the planning administration, the workforce administration, the administration of teacher education and in-service training, and the finance and budget administration.

- Shortage of current data on the demand and supply of teachers and lack of information on the amount of those receiving the many types of teaching diplomas.

- Lack of policy guidelines related to granting advanced degrees, in-service training, criteria for college budgeting, etc.

- Neglect in developing the infrastructure of the colleges of education including building, labs, computer labs, maintenance, etc.

Recommendations made by the Ben-Peretz committee, which were not yet implemented, include the creation of an authority for developing academic personnel with special statutory status, similar to the Commission of Higher Education. According to the committee, without such an authority - which will have legislative power - it would be difficult to change the status and situation of teaching in Israel.

1. THE NATIONAL CONTEXT

1. This chapter aims to describe the national context in which Israeli educational policy was shaped. Following a short introductory section, some demographic, economic and labor market trends will be presented, as well as some indicators concerning societal attitudes towards teaching as indicated by the prestige of teachers and the teaching profession.

1.1. Introduction

2. Israel was established in 1948, following the Second World War and the Jewish Holocaust, in order to realize the Jewish people's right to their own homeland. It is a small country extending over 22,145 square kilometers[1] on the eastern shores of the Mediterranean Sea, surrounded by Arab countries on all its terrain borders. Its birth and 55 years of existence have been in the shade of seven wars and several Palestinian uprisings (i.e., intifadas). In 1948, 873,000 people lived in Israel, of whom 717,000 (82%) were Jews and the rest, members of other religions including Christians, Muslims and Druze.

3. Israel is an immigration country and has absorbed immigrants, mainly Jewish, since the beginning of the 20th century with an immigration increase in the second half of the last century, especially in the 1950s and 1990s, following the establishment of the state. Relative to the size of its population, the volume of immigration to Israel is excessive, with 32% of the population born outside Israel, a figure that exceeds other immigration countries such as Australia and Canada (20%) (CBS, 2001a). Jews in Israel comprise 37% of the world-wide Jewish population.

4. In 2000, Israel's population, living mostly in urban localities, comprised 6.4 million, out of which five million (78%) were Jewish, one million Muslims (16%), 138,000 Christians mostly Arabs (2%), 104,000 Druze (1.5%) and about 200,000 other inhabitants (3%) (CBS, 2002a: Table 2.1). The mean annual growth of Israel's population is 2.5% higher than that of other western countries, with a higher rate of growth among the Arab population than among the Jewish population (3.4% vs. 2.4% respectively). This considerable growth has led to a sharp rise in population density per square kilometer – from 43 in 1948 to 294 in 2001 (CBS, 2002a: Table 28.1).

5. The country is divided into a number of geographic regions with the population dispersed between center and periphery in a more balanced way now than before. Yet, while 50% of the Jewish population today lives in the central region of Israel, 50% of the Arab population lives in the northern district (CBS, 2001a).

6. Several health and cultural indicators place Israel among the developed countries,[2] ranked 23 according to UN reports: life expectancy (77 for males, 81 for females), infant mortality (6 per 1000); adult literacy rates (95.4%) and daily newspaper consumption (288 per 1000 inhabitants) (Martin et al., 2000, Exhibits 3,4).

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1 Including East Jerusalem and the Golan Heights.

2 From those participating in the TIMSS 1999 study.

7. Economically, Israel is classified as the most developed country in the low-middle income group by OECD comparative figures, with an estimated GDP per capita of US$ 17,900 in 2001. This is a 50% increase of its 1990s figures, even though it is only 88% of the average GPD per capita of the OECD countries. Israel's relatively advanced high-tech sector is the key factor in its economic growth and was largely responsible for Israel's' annual average GDP growth which reached its peak in the year 2000 (OECD, 2002a).

1.2 Demographic Trends 1990-2002

8. The main demographic change during the 90s, with direct implications for schools and teaching staff, consisted of two immigration waves, from the former USSR (883,000) and Ethiopia (42,000). The influx of immigrants was especially massive in the years 1991-1992 (315,000), 1992-1994 (189,000), 1995-1996 (120,000) and 1997-2001 (260,000) with 25% of the immigrants aged 0-19 upon arrival in Israel (CBS, 2002a: Table 2.25).

9. While population growth in Israel among the Arab sector is mainly due to a natural increase, among the Jewish sector it is mainly due to migration balance. As noted in Table 1.1, the percent of annual increase of population between the years 1990-1995 was higher among the Arab population (3.4%) than among the Jewish population (2.3%). The situation is reversed regarding population growth due to migration, with a higher percentage among the Jewish population (48.3%) than among the Arab population (5.0%) (CBS, 2002a: Table 2.2).

10. Population distribution by religion and age reveals that the mean annual growth of the Arab population (3.3%) is higher than that of the Jewish population (2.3%) and that overall, in both populations, the total annual growth, which will affect the student population, occurs at ages 0-4 (2.57% compared with 1.5% in other ages) as shown in Table 1.2 (CBS, 2002a: Table 2.20).

11. Population projections for the years 2005-2020 (CBS, 2001b: Table 2.27; CBS, 2002a: Table 2.27) forecast that the annual growth among the Arab population will exceed that of the Jewish population although in both populations there will be a decrease in the annual mean growth and in the ratio between younger and elder population, i.e., an aging of both Jewish and Arab populations (Table 1.3). Other forecasts further project a 10% growth in the total student population in 2006/2007, with a larger growth in the Arab sector (20%) than in the Jewish sector (7%), the latter being based mostly on immigration with the highest rate in kindergarten and lower-primary school (Sprinzak et al., 2003: Table C12).

1.3 Economic Trends 1990-2002

12. Economically speaking, the years 1990-2001 can be divided into two completely dissimilar periods.

13. The first period, 1990-1996, is characterized by mass migration from the former USSR, reduction in the political tension in the Middle-East accompanied by the peace treaties with Jordan in 1995, and the mutual recognition between the Palestinian Liberation Organization and the State of Israel in 1993 which led to the Oslo accords (1993-1995). The mass migration led to an increase in private and public consumption and to an increase in construction; the peace process brought about an increase in overseas' investment. These resulted in an average increase of 6% per year in the Gross National Product (GNP) and an increase of 7-8% per year in the business sector. Despite the volume of immigration, the GNP per capita also grew by 2% per year and at the end of 1996 it was equal to that of other European countries and higher than that of New Zealand, Spain, Portugal and Greece. Furthermore, the inflation rate declined sharply from 20% in 1989 to 9% in 1996 and the exchange rate, which was low throughout the period,

instigated an increase in import – about 11% per year – while export grew only about 7% a year. This resulted in an increase of 5% in Israel's deficit of the payment balance. Taxes during that period decreased to 37% of the GNP while the Private Free Income per capita increased by an average 3% per year. At the end of 1996, the unemployment rate was 6% only. These positive trends were reflected also in the budget of the Ministry of Education which grew, in fixed prices, from 1992 to 1996 by 57%, and its share of the national budget grew from 6.4% to 9.2% (CBS, 2001c, 2001d, 2002b).

14. The second period, from 1997 until today, is characterized by an economic recession caused by the uncertainty in personal safety that peaked in October 2002 with the Palestinian uprising, i.e., intifada; the world-wide recession, especially in the high-tech industry; the economic crisis in the Far-East and in Russia which affected exports, especially in the diamond industry; and the drop in immigration from the former USSR. All these have led to a decrease of 2% per year on average in the GNP with a negative increase of -0.5 since 2001. Furthermore, in 2001, in comparison with 2000, there was a decline in construction investments, in export and import, and in tourism which went down from 2.4 million tourists in 2000 to 1.2 million in 2001 (CBS, 1999a, 2001d; CBS, 2002a: Table 23.6). Unemployment rates increased and exceeded 10% of the civil working force. These negative trends were also reflected in the budget of the Ministry of Education which grew only by 2.8% in this period (compared to 75% in the previous period). Yet, in spite of this, the share of the Ministry of Education in the national budget did not decline (Sprinzak et al., 2003).

1.4 Trends in the labor market 1990-2002

15. The educational sector is one of the largest occupational sectors in the Israeli labor market. The percentage of persons employed in education, out of the civilian labor force, was 12.6% in 2001, most of them salaried employees, half of them part-time employees, a figure which is twice as much the ratio in the civilian labor force. Table 1.4 presents the percentage of employed and salaried workforce in education in 1993-2001. Data show that the percentage of salaried personnel in education varies between 13%-14%, with four times more women than men, and is not affected by national rates of unemployment (CBS, 2001b: Table 12.11; CBS, 2002a: Table 12.11).

16. Table 1.5 presents data on the number of employed persons in education compared to the total number of persons employed in the civilian labor force between 1989-2001. Also presented in the table is the percent of part time employees in these two categories. The number of persons employed in the educational system reached 283,000 in 2001 compared with 188,000 in 1991, about half of them working part time as opposed to only 27% in the civilian labor force. These figures are stable over the 1990s (Sprinzak et al., 2001: p. D73).

1.5 Main trends related to public and private educational resources

1.5.1 Educational expenditure

17. Israel is a welfare state: it is supposed to ensure, by decree, a minimum level of welfare and social security to its citizens and to supply various social services including that of education. Government policy, in this regard, can be examined by considering the national expenditure on education as a percentage of the Gross National Income[3] or as a percentage of the Gross Domestic Product.[4] The national

[3] Gross National Income equals the gross national product minus money paid to foreign units operating in Israel plus money paid to Israeli economic units that operate abroad.

[4] Sum of the income of the productive units in Israel.

expenditure on education is divided between fixed capital formation expenditure (about 10%) and current expenditure, mostly on educational institutions (about 90%; out of this, in 1998, 10% was allocated to pre-primary educational institutions, 29% to primary educational institutions, 28% to secondary education, 22% to post-secondary and higher educational institutions, 4% to administration, 3% to adult education and 4% to religious institutions and other miscellaneous matters) (CBS, 2002c: Figure 8.6). Table 1.6 presents this information for four calendar years: 1990, 1995, 1997 and 1998. The Table shows an increase in the national expenditure of education as a percent of Gross National Income over the years (CBS, 2002a: Table 8.5).

18. In an international comparison project done by the OECD[5], it was found that Israel's total national expenditure on education is higher than the average of all other OECD countries (Table 1.7). Moreover, while Israel's national expenditure on education remained stable until 1998, the average percentage in the OECD countries declined from 1994 to 1999 (CBS, 2002a: Table 28.14; CBS, 2001b: Table 28.9; CBS, 1999b: Table 4.1).

19. Taking into consideration that the percentage of primary and secondary school-aged children (ages 5-19) in Israel is higher than that in other OECD countries[6] and that most of the youngsters in these age groups are enrolled in school (about 96%-97%) (CBS, 1999c), a better measure for comparison would be expenditure per student (Table 1.8). The table shows that the expenditure per student in public and private education institutions in Israel increases by level of education and is lower than that in the OECD countries only in the pre-school education while equal or higher than that of the average OECD countries in other levels of education (1999 data). The table also shows that the ratio between expenditure per student in the post-secondary and higher level institutions vs. that in primary level is smaller in Israel (2.6) than in other OECD countries (2.9) (CBS, 2002a: Table 28.14; CBS, 2001b: Table 28.9). Based on the above figures in Tables 1.7, 1.8 regarding national expenditure on education and expenditure per student, it can be concluded that the Israeli investment in education is high.

1.5.2 Public and private expenditure

20. The government's share in the national expenditure on education is much higher than that of non-governmental non-profit institutions and households (80% vs. 20% respectively), a ratio that remained stable during the 1990s. This ratio between public and private sectors in Israel is similar to other OECD countries, with the public sector financing mostly primary and upper primary education (Table 1.9)[7] (CBS, 2002a: Table 8.4; CBS, 1999c: Tables 9,10).

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5 For international comparison purposes national expenditure on education is presented as a percent of the GDP. Special exchange rates known as Purchasing Power Parities (PPP) were constructed. On the basis of these rates it was possible to deduct the differences in price levels found in the different countries.

6 19% vs. 13% at the ages 5-14 and 9% vs.7% at the ages 15-19 respectively.

7 Yet, it should be noted that public expenditure in Israel is over-estimated since, as a rule, once institutions are budgeted over 50% by the government, their total budget is considered as public expenditure.

1.5.3 Ministry of Education's budget for teachers' salaries and for pre- and in-service teacher training

21. Since 1990, the Ministry's budget increased in fixed prices by 83.5% with the main increase occurring until 1995 and a decline in growth ever since. This decline is in contrast with an increase of students (Sprinzak et al., 2003: Table B1-B2). Nonetheless, in spite of this decline in growth during these years, the share of the Ministry in the total budget remained stable. Distribution of this budget shows that most of it (96%) is allocated to formal education with 29% transferred to local authorities for the purpose of budgeting educational activities. The latter figure has increased over the past few years, reflecting the introduction of compulsory education for preschool children which is mainly budgeted by the government through local authorities (Sprinzak et al., 2003: Tables B1, B2, B9).

22. Most of the Ministry's expenditure in 2003 – about 90.6% – is allocated to salaries, and 9.4% for other expenses. Out of the salaries budget, 72.6% is allocated to teacher salaries from kindergarten to post-secondary in all educational sectors and 18.0% is channeled to other salaries (Sprinzak et al., 2003, Table B4). The percentage of teachers' salaries out of the total budget of the Ministry of Education remained stable since 1995 (Table 1.10). These data, accompanied by additional data on the growth in the total number of paid teaching hours (from 2.5 million in 1995 to 2.9 million in 1999) and the growth in the number of teaching positions (from 77,320 in 1996 to 84,050 in 1999), indicate an erosion in the cost of an annual teaching hour in all levels of education. Additional data on the decline in the annual cost of a teaching hour in all levels of education is presented in Table 1.11. The cost of an annual instructional hour in fixed prices (2003) has decreased from 1996 to 2003, with the highest decrease found in lower-secondary and upper-secondary schools.

23. The budget of the pre- and in-service teachers departments, which deals with teachers' preparation and ongoing development before and in the course of their work, reached 1.7 billion NIS at current prices in 2003. This figure comprises 7.1% of the total budget of the Ministry of Education, half of it directed to pre-service training of teachers, 10% to improving conditions of practicing teachers in schools and 40% to in-service activities conducted at special centers for the professional development of the teaching force (PISGA) as shown in Table 1.12.

1.6 Teaching and teachers' occupational prestige

24. Social attitudes towards teachers can be viewed as an additional aspect of the social and cultural context that affects schools and the teaching profession. Occupational prestige is a subjective measure, reflecting the public's level of esteem towards a certain occupation, via its ranking on prestige scales. High occupational prestige is considered one of the characteristics of a profession in its classical sense. Such a profession is defined as one that requires mastery of knowledge and skills, demands an extended period of preparation, contributes to society and financially profits its members.

25. According to studies carried out in the past, Israeli teachers were ranked in a relatively high position compared with other professionals: in 1968, a high school teacher was ranked 8 out of a 24-point scale, with 1 indicating the highest rank (Lissak, 1968); in 1974, using another scale, high schools teachers were ranked 86 out of 100 and principals were ranked 91-93, 100 being the highest level (Kraus, 1981).

26. During the years 1974-1989, there was a decline in the occupational prestige of educational professionals in all levels of education, including school principals (Kraus & Hartman, 1994). In addition, there was a decrease in the correlation between occupational prestige and professionals' level of education while there was an increase in correlation between occupational prestige and level of income.

27. Another study, conducted between 1972 and 1983 (Addi, 1992), showed that even after improving teachers' income, raising certification requirements and prolonging the period of studies needed to obtain an academic degree or diploma in the teaching profession, the slump in the occupational prestige of the teaching profession continued and teaching was pushed further down from the upper semi-professional rungs on the scale to a central position, putting teachers' status on a par with that of nurses, translators and technicians. Furthermore, it seems that the Israeli public regards teachers even less than they actually deserve on the basis of income and level of education. Among the reasons for this low occupational prestige Addi counts the low socio-economic status of those who apply for teaching jobs, the huge magnitude of the teaching work force and the growing number of specialists within the educational system, such as administrators, psychologists, measurement and evaluation consultants, technology and computer experts, who enjoy higher occupational prestige than teachers. The low occupational prestige is also caused by the practical nature of the knowledge required for teaching and by the fact that this is mainly women's profession and one that deals with young clients. Addi & Chen (1993) claim that it is doubtful whether the occupational prestige of the teaching profession can be improved by raising teachers' salaries and improving their working conditions. Increasing teaching's prestige can be achieved, according to Addi and Chen, by making it a more demanding multidimensional profession, requiring sophistication, implementation of skills and ongoing training.

28. During the 1990s, an attempt was made to raise teachers' status via a massive campaign addressed to the public, with the motto: "A good teacher is a teacher for life". The campaign was run for one year by the Ministry of Education in the media, on nation-wide billboards and at educational exhibitions, and accompanied by awarding prizes to excellent teachers. Yet, this campaign, which stirred public debate and whose appropriateness was even disputed among teachers, did not change the state of affairs (Schwarz, 1996). At present, teachers' occupational prestige is still low, the teaching profession is not considered an attractive one, and both suffer from low public esteem. The choice of becoming a teacher is often by default.

2. THE EDUCATIONAL SYSTEM AND THE TEACHING FORCE

29. Educational policy is the immediate context affecting schools and teaching. This chapter describes educational policy in Israel and its main outcomes. It also describes the structure of the Israeli educational system including school types, student population and teaching workforce characteristics. Teachers unions are described at the end of the chapter.

2.1 Educational policy and its impact

2.1.1 Historical perspective

30. The term educational policy refers to the overall attempts made to affect the functioning of an educational system's objectives, processes and products in a given country, either by decree, by regulation, or by non-institutionalized interest groups (Archer, 1981; Gaziel 1999). Educational policy itself is affected by a range of contextual factors such as the political, economic and social. Israeli educational policy, which has evolved during more than 50 years since the establishment of the country, reflect changes in the Israeli political, economical, and social context, including changes in societal values. These changes are partly local and partly a reflection of international trends.

31. In its early years, Israel faced the immense challenge of absorbing an influx of immigrants from Europe, Asia and North Africa, in numbers that doubled its population. Simultaneously, the new state also faced the challenge of establishing its national institutions and consolidating national identity. The societal ethos prevalent at the time was that of collectivism, social equity and nation building. Over the year, with the building of democratic institutions and economic establishments and with the strengthening of the middle class, this ethos has evolved into one of individualism, economic efficiency, excellence and social pluralism.

32. These changes in Israel's societal ethos were accompanied by changes in economic policy: moving from a welfare policy to a market-economy policy with minimal state intervention; lowering taxes and giving the public the opportunity to choose and finance most of the services it requires. This move was also characterized by a new discourse in which the terms clients, competition, initiation, quality control and accountability were common.

33. The above changes came into play in educational policy as well. In the early years of the state, educational policy was centralistic, aiming to promote urgent national targets. This policy brought about the creation of large and complex bureaucratic mechanisms, which maintained their power until the 1980s when decentralization started. The process of decentralization was expressed in a reduction in state authority in favor of local authorities, communities, schools, parents and pupils. In parallel, market ideas penetrated the educational system. These were expressed in parental choice of schools, in the establishment of unique inter-regional schools and a move towards granting schools more autonomy and authority (Volansky, 1994; Yogev, 1989, 1999).

34. Changes in educational policy can be traced by considering the legislative acts and main reforms that occurred since the birth of the country (Gaziel, Elazar & Marom, 1993; Gibton, 2001, Hacohen, 1999, Reshef, 1987, Volansky, 1999a, Yonah and Dahan, 1999). The first two laws to be legislated came

primarily to ensure that all pupils within the state, without any racial, religious or gender discrimination, would have the right to education (the Compulsory Educational Act, 1949) and that the state would provide equal education with no relation to political, ethnic origin or any other organizational affiliation (the Statehood Educational Act, 1953).

35. The Compulsory Education Act of 1949 obliged parents to enroll all children, aged 5 to 15, in an educational institution of one out of four ideological streams: the state-education stream which also included Israel's Arabic citizens, the "Mizrahi" or state-religious stream, the socialist stream and the ultra-orthodox stream. Later on, following amendments, this law determined the state's responsibility to provide free education to all children between age 5 and 18, and reduced the power of local authorities which, until that time, used to be responsible for numerous educational issues based on the 1933 British educational mandatory act, thus contributing to the centralistic nature of Israel's educational system.

36. A belief in nation-building as a response to a political and social split was shared by all political figures - amongst them the Prime Minister, Ben Gurion, and the Minister of Education, Dinur – and led to legislating the Statehood Educational Act which appointed the state as the sole authority to decide upon the subject matters to be taught in schools: "For every school subject and for every class it is the Ministry which will decide what the teacher should teach; all teachers in all Israeli schools will teach the same material to all students without any differences" (Minister of Education, Dinur, 1953).

37. Acts of law were applied also in the Arab sector, which despite its subordination to the state educational system, constitutes a separate system in which students, teachers and principals are all Arabs and the language of instruction is Arabic.

38. The centralistic educational policy that resulted from the two legislative acts described above, issued a strategy of equity amongst schools regarding both inputs (e.g., a unified curriculum, equal number of students per class, equal number of learning days per year, similar teaching methods, etc.) and outputs (e.g., equal percentage of students entitled for a matriculation diploma, equal level of achievements). During this centralization period, a policy of enforcement and control was conducted by the state via the legal establishment of the inspectorate body (Inspectorate Law 1969). At the same time, school principals' authorities were transferred completely to the state, which now controlled all areas of education including pedagogical, organizational and monetary matters as well as the employment of teachers who all became civil servants in 1953 (excluding high-school teachers).

39. Attempts to permit a certain degree of pluralism in schools were few. They can be traced in the permission to leave 25% of curricular contents to be determined by at least 75% of the parents in a school, and in the autonomy given to the state-religious, ultra-orthodox and socialist streams as well as the Arab sector to shape their own curriculum according to their ideology and beliefs. For example, during the 1980s, as part of a proposal for an educational program, special adaptations were offered for Israeli-Arab education, taking into consideration their identity conflict (Peled, 1976).

40. However, only in 1999/2000, an amendment to Article 2 in the Statehood Educational Act of 1953 was introduced to also suit the Israeli Arab citizens who are expected to be loyal citizens of Israel while also preserving their own heritage, cultural identity and language (Item 1). In two other items (4 and 11) a direct concern is expressed for cultural aspects of the two ethnic groups: teaching the Jewish bible, the history of the Jewish nation, the Jewish heritage and tradition and the memory of the holocaust, on the one hand, and transmitting the language, culture, history and heritage of the Arab population, and other ethnic minorities in Israel, on the other.

41. Revisiting the idea of a unified curriculum can be found nowadays in the attempt to establish a core compulsory curriculum, which includes clusters of contents, learning skills and social values for all sectors of Israeli society. The core curriculum is regarded as a way to create a common denominator for all pupils enrolled in the educational system, Jewish and non-Jewish alike, with the exception of the component of social values which is treated separately for Jewish and Arab cultures (Ministry of Education, Pedagogical Secretariat, 2003a).

42. The first educational reform in the Israeli educational system occurred when the educational leadership realized that the policy of equity did not prove itself. Huge gaps found between high and low socio-economic strata (henceforth SES) showed that equal opportunities in education do not guarantee equal use of these opportunities and do not ensure equality in educational outcomes, as high SES classes were more efficient in exploiting the resources than low classes of SES. This recognition led to a policy conversion from that of equality to that of differential treatment and affirmative action.

43. Since the 1960s the new term of "disadvantaged students" was coined and criteria of compensation for schools (e.g., in number of classes, number of hours and other resources) were set based upon the percentage of students defined as disadvantaged. Disadvantaged populations were found mostly among Jewish pupils from Middle-Eastern origin and among Arab students. Apart from financial benefits, the policy of compensation and affirmative action also included the development of differential curricula for different populations and the development of other differential mechanisms such as special thresholds on entrance to higher educational institutions, special placement tests and short-term programs in secondary schools, and graded tuition fees for students from low-income families (Gaziel, Elazar & Marom, 1993).

44. It should be noted here that this affirmative action policy was implemented only at a much later stage in the Arab sector. Initially, in the 1970s, an attempt was made to gain equality by merging the Arab department within the Ministry of Education with an already existing administrative unit at the Ministry. When this attempt failed, the Ministry of Education initiated two five-year plans which were mainly affirmative in nature. The first five-year plan was put into action during the 1990s, when special nurturing criteria were set for the Arab sector, leading to differential allocation of resources in the pre-primary and upper-primary schools. The second five-year plan was launched early in 2000, when the failure of the previous plan became evident in light of data which demonstrated persisting inequalities between the Jewish and Arab sectors (Table 2.1) (Sprinzak et al., 2003: Tables C23, D5, C9, C11, F1). The new plan again applied a compensatory policy which aimed, as before, at improving achievements, raising the percent of students entitled to matriculation, strengthening the study of elementary skills, supporting special educational frameworks and providing professional support for teachers and principals (Ministry of Education, December 2002, the 5-year plan).

45. Towards the end of the 1960s it became evident that the affirmative action policy within the Hebrew-speaking sector was not yielding the expected results and did not narrow the gaps between high and low socio-economic classes. These gaps also reflected ethnic stratification since high SES schools were mainly populated with students of western origin while low SES schools were mainly populated with students of Middle-Eastern origin. As a result of these gaps, societal pressure for social integration, led to the appointment of several committees (Prawer, 1965, Rimalt, 1966), which recommended a comprehensive structural reform within the educational system. According to this reform, which was passed as a law in 1968, the existing structure of an eight-year primary school and a four-year secondary school was to be replaced by a structure of a six-year primary school, a three-year lower-secondary school (junior-high school) and a four-year upper-secondary school (high school). The junior-high school was a new structure that was supposed to realize the policy of social integration of pupils from different origins and social classes. Junior-high schools, which were nourished by pupils from different neighborhoods,

were meant to achieve two goals: (a) offering equal educational opportunities for students of all classes and origins, thereby narrowing the achievement gaps among them, and (b) creating conditions for the social integration of the above groups.

46. The social integration reform by means of restructuring the educational system, even though initiated as a result of public pressure, was mainly a top-down process. Still, the governmental bodies that were meant to implement it showed little enthusiasm. Transferring responsibilities for reform implementation to the local authorities and the sluggish pace of implementation reflected the lack of consensus that accompanied the new policy. Different stakeholders rejected the idea, amongst them local authorities, which had the burden of executing the reform, teachers unions, which were not part of this initiation to begin with, and high-SES parents who were concerned about any possible harm caused to their children. To date, more than 30 years after its announcement, this reform does not encompass all pupils. In 2001, only 73% out of all pupils in Grades 7-9 in the Hebrew-speaking sector and 70% in the Arabic-speaking sector were studying in the junior-high school. (These data refer to all students in the regular and special education of the official education and the non-official acknowledged education[8]).

47. The public debate regarding this structural reform was accompanied by an academic debate. Research conducted on the impact of social integration policy pointed to its failures as it had no significant positive effect on the achievement of "weak"[9] students, usually from low SES groups, although no negative effects were found on the achievement of "strong"[10] students, usually from high SES classes (Chen, Levi & Adler, 1978; Dar & Resh, 1985; Resh & Dar, 1986). Furthermore, in many of the junior-high schools, a policy of "segregation within integration" through grouping was implemented (Dar & Resh, 1988; Resh & Dar, 1990). In addition, it was found that even though parents were entitled to enroll their children in a more prestigious school outside their geographical area, many parents (83%) from disadvantaged areas did not exploit this opportunity (Tel-Aviv-Jaffa Educational Administration, 1995).

48. Nonetheless, this reform also had some positive outcomes, mainly school perseverance, i.e., it prolonged years of study among students from Middle-Eastern origin in the Hebrew language education sector (Chen & Kfir, 1981). The reform also led to curricular reforms and consequently to the upgrading of teacher training since junior-high teaching requirements demanded higher levels of knowledge and skills from teachers previously teaching at the primary level. It also required an adequate didactical response to teaching in heterogeneous classrooms (Gaziel, Elazar & Marom, 1993).

49. During the 1980s, opposition to the policy of integration and its limited success brought about a shift from an official policy that prioritized equity, societal integration and unity to a policy which prioritized excellence, societal pluralism, individualism and economic efficiency. This shift also reflected a general atmosphere of suspicion towards public institutions and doubts as to their ability to provide services in a fair manner; public criticism of political centralism and bureaucracy which was perceived as cumbersome, inefficient, and socially unjust, and a general preference for economic competition and belief in the advantage of free market mechanisms (Yonah & Dahan, 1999).

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8 "Official education" refers to educational institutions mostly primary and lower-secondary governed by the state or local authorities and appearing in lists of official schools. These institutions provide state-secular and state-religious education.
"Acknowledged but non official" institutions refers to institutions which are not defined as official and listed as such.

9 "Weak" as defined in terms of intellectual abilities.

10 Strong" as defined in terms of intellectual abilities.

50. All these developments strengthened the decentralization trends in education, with a progressive spread from central headquarters to districts, and then to local authorities, communities and schools, the latter being perceived more and more as service-givers operating according to rules of demand and supply. Gibton (2001) explains the strengthening of decentralization tendencies in Israel, as well as world wide, through a convergence of interests of different groups: government interest to avoid taking full responsibility for educational products; the interests of ethnic, ideological and religious groups to maintain independent educational systems; interests of the business sector to act and profit in the educational system; parental interest to control and influence school affairs and finally, teachers' interest to boost their professional status, and to take part in decision-making on pedagogical matters and work conditions.

51. Decentralization has been gradually taking place in Israel since the late 1970s. In 1976, a national committee was appointed by the government, whose aim it was to reduce the government's continuous and dominant involvement in the local authorities and to replace it with a mechanism of coordination in line with government priorities. Following the committee's recommendations, the local authorities gained back some of the education-related responsibilities they used to have in the past, including budget and pedagogical responsibilities.

52. At the same time, other processes in line with decentralization trends started: more autonomy was granted to schools and parents were given the freedom to choose schools for their children. These two processes ran counter to the former move to empower local authorities as they eroded some of the local authorities' responsibilities.

School Autonomy

53. Initially, school autonomy was aimed to encourage educational initiatives within primary schools as well as allowing them to use learning hours according to their needs. Autonomy in primary schools, in its early stages, was only pedagogical in nature and doubts were voiced as to whether schools were mature enough to act as autonomous institutions. Moreover, the Ministry was reluctant to give up its power, as reflected in a special circular published by the Ministry (Ministry of Education and Culture, 1976, Special Circular 1) according to which "it goes without saying that any pedagogical autonomy granted to schools will not reduce the authority and responsibility of the Ministry of Education to control these schools".

54. At a later stage, characteristics of the autonomous school were further defined by a team from Tel-Aviv University in coordination with of the Ministry of Education (Reshef, 1984). These characteristics include the formulation of an institutional educational agenda, the definition of operational aims, the free choice of educational material and contents, and conducting feedback processes and professional development of teachers. Since 1984, a move towards organizational autonomy, and not just pedagogical autonomy, was initiated, thus turning schools into autonomous organizational units that also cater for themselves economically (Ministry of Education, 1984, Special Circular 44/9).

55. Research accompanying the school autonomy initiative pointed to positive results but also to some limitations. In 1989, it was found that only in about one third of 931 primary schools, school teams actually decided upon a detailed policy, while in about half of the schools only very general policy lines were set out (Haymann, Posner, & Shapira, 1994). Yet, other studies showed that teachers' involvement in planning the school based-curriculum increased (Silberstein, 1984, Sabar, Silberstein & Arbel 1984, Sunnin, 1982) and that their level of involvement in shaping school policy remained steady even after ten years of implementing school autonomy (Aroshas, 1996). On the other hand, Inbar (1987) claimed that granting autonomy to schools did not result in real autonomous behavior since the Ministry of Education did not, in fact, weaken its control mechanisms and it drastically reduced the number of teaching hours allocated to schools. In such a situation, school autonomy remained an idea expressing a right with no

actual prospects to realize it. Inbar refers to this kind of autonomy as "institutionalized autonomy" which leads, in his opinion, to privatization.

56. Parallel to granting autonomy to primary schools, some attempts were made to grant pedagogical autonomy to upper-secondary schools as well. These schools were given official authorization to determine their core curriculum and the extent and level of each school-subject to be taught, and were authorized to confirm topics for final projects and to offer end-of-high-school examinations. The liberalization in matriculation examinations caused an administrative overload that the Ministry of Education could not cope with. In addition, universities did not approve all types of matriculation since some did not match their admission requirements. Thus, due to objections and budget cutbacks, and in spite of the encouraging results of the experimental schools, towards the end of the 1980s, the Ministry of Education retreated from the idea of school autonomy, both at the primary and upper-secondary level.

57. The move towards school autonomy resumed in the 1990s, supported this time by notions of school effectiveness and school-based management, imported from abroad. In 1992, with budget transferred via the local authorities, schools were officially authorized by the Ministry of Education to take full responsibility for their entire resources. According to this approach, self-managed schools are budgeted in an equal but differential transparent mode, dependent on numbers of students. Schools are managed as a closed budgetary system and are allowed flexibility within the limits of their budget. School principals are given full authority in managing their personnel while the inspectorate's role is limited to supervision, support and guidance. The Ministry of Education limits its roles to the national curriculum, budgetary criteria, achievement benchmarks and national standards. Schools are responsible for their pedagogical and administrative planning in accordance with the official curriculum, and they are responsible for students' achievements.

58. The move towards school-based management was a two-phased one: in 1996, it was implemented on an experimental basis in one local authority, and from 1998 onward there was a gradual spread to all other local authorities. The results of the experiment showed an increase in the extent of teachers' involvement in essential and pedagogical decision making (Friedman, 1997). Yet, here too, in spite of the positive results, the move to school-based management faced antagonism from different stakeholders: the Ministry of Education was reluctant to reduce its control; the inspectorate, which had hitherto acted as the executive branch of the Ministry was unwilling to lose its authority; local authorities were interested in having control over budgets transferred to them; teachers unions feared principals' over-empowerment and privatization trends; and teachers were worried about work overload.

59. Nowadays, the tendency is to grant schools more organizational and pedagogical autonomy via direct budgeting per pupil (Shoshany, 2002), while reducing control at the Ministry of Education. The Ministry monitors school activities and makes sure that they follow the core curriculum. Ministry regulations are carried out by means of feedback mechanisms and other standardized evaluations that are conducted either on nation-wide samples or on all schools.[11] Teachers are marginal in these decentralization processes as they are recruited to fulfill the collective vision of the school. At present, it is too early to draw conclusions about the effectiveness of the school-based management initiation, especially on the basis of students' achievements. However, recent developments in this field - especially legislative actions which require local authorities to transfer budgets to schools and gain the support of teachers unions - indicate that this tendency is going to gain strength in the coming years (Volansky, 2003).

[11] Meitzav Test – Measures of Efficiency and Growth at the School Level.

Parental choice

60. During the 1990s, parallel to the school-based management project, there were other policy initiations in line with the educational system's decentralization tendencies. Based on worldwide experience with parental choice of schools, it was suggested to implement parental choice in Israel. A precondition for allowing parental choice was ensuring *equivalency*, i.e., the possibility to choose among schools of equal quality, a requirement that involved the restructuring, renewal and improvement of schools (Inbar, 1993). This was first tried out in one locality but proved unsuccessful as 83% of the parents chose schools in their own neighborhoods, even if educational services were of lower quality there. Parental choice of schools did not succeed as expected due either to lack of comparable data about schools or parents' fear to transfer their children to a new environment where they might feel alienated. This may also be a result of a powerful tradition to send children to a nearby school for social and geographical reasons.

61. An additional new initiative, also related to parental choice, was the establishment of unique content- or ideology-based inter-regional schools (e.g., art, science, democracy-oriented schools). Yet, these unique schools, which usually fostered academic excellence and aimed towards special target populations, contradicted the policy of social integration and a public committee was appointed with the aim to secure uniqueness without violating social integration. The committee's recommendation was to establish these unique schools under the shared supervision of the Ministry of Education and local authorities so as to prevent the creation of racially homogenous or class-based schools.

62. In a recent attempt to prevent the escape of high-quality students from the various neighborhoods to the inter-regional unique schools, creating intra-regional schools within the registration regions is now being considered (Ministry of Education, 2002a). Permission to open unique schools is dependent on a number of conditions: social integration should be maintained; racial segregation must be prevented by prioritizing acceptance of students from lower socio-economic status whenever there is a surplus of in demand of candidates and the Ministry's core curriculum and external evaluation procedures must be followed. These regulations and criteria set by the Ministry are another example of the conflict between the ethos of centralization and that of decentralization that has been accompanying Israel's educational system throughout the years.

63. In the new millennium, this dilemma of the Israeli educational system remains the same. Still, ideas of unification, social equity and integration contrast with ideas of pluralism, economic efficiency and elitism. Still, a conflict exists between regulated welfare policies versus deregulated free-market based policies, and still, a conflict exists between prioritizing collective versus private interests. Scrutiny of the Ministry's priorities as expressed in a series of documents[12] reveals the existence of two types of educational programs representing the two tendencies described above.

64. In congruence with the ethos of social equity, one can find programs of equal allocation of inputs and equal definitions of outputs such as the new core curriculum and its following standards; equal criteria for budget allocation; the enactment of nation-wide unified programs for all pupils such as the promotion of scientific and technological education, the program of Jewish studies for the secular stream; a program emphasizing democratic values, tolerance and understanding; programs for violence prevention and a program for promoting positive behavioral norms in schools and society. In line with this ethos are also all compensatory programs such as the five-year plan for the Arab sector; affirmative action programs in peripheral settlements; compulsory education at ages 3-4, prevention programs for drop-outs, a long

[12] Tirosh, 2002; Ministry of Education, 2003b; Volansky, 1999b; Sprinzak et al. 2001; Ministry of Education Budget Proposals.

school-day program for communities in need, etc. Other compensatory programs are programs intended to increase the number of pupils entitled to matriculation, to integrate special education pupils in mainstream classes, and to absorb immigrant students and teachers.

65. In line with the second approach, i.e., the ethos of excellence, economic efficiency in education and pluralism are the following projects: school-based management; a school feedback evaluation system providing data for the schools as well as for decision makers, parents and pupils; regulated parental choice of schools and establishment of unique inter-regional and intra-regional schools. This policy includes other activities aimed at upgrading teachers' professionalism such as the academization of teachers colleges, implementation of collective salary agreements and encouragement of teachers' ongoing professional growth via in-service training. Also included in this policy line are the attempts to improve the functioning of the administrative bodies in the Ministry of Education by preventing redundancies, merging districts, privatizing some of the activities and allowing teachers' employment by private non-profit organizations.

2.1.2 Educational policy attainment in Israel

66. In this section we use several indicators providing information on the extent to which each of the policies described above – striving for equity on the one hand and striving for excellence on the other hand - were met.

Equity in allotment of educational resources

67. The average numbers of weekly hours per class and per pupil by level of education are used as indicators of equal allocation of resources. The change that occurred in these two measures from 1990 to 2002 in the Hebrew and Arab sector (Table 2.2) reflects a narrowing of the gap between these sectors, even though the gap still exists (Sprinzak et al., 2003).

Education for all – enrollment rates

68. The enrollment rate of Israeli children under the age of four, which is higher than the average in the OECD countries (98.6% vs. 60%), reflects the effort to include these young ages in the compulsory education law (CBS, 1999c: Table 19). The enrollment rates of primary and lower-secondary pupils are similar to those of the average in the OECD countries (97.7%), while in the secondary schools the rate is higher than that of the OECD countries (95% vs. 93% at the age of 15, 92% vs. 89% at the age of 16, 85% vs. 79% at the age of 17) (CBS, 1999c: Table 1.3). These high enrollment rates demonstrate that the goal of providing education for all has been achieved. However, gaps still exist between the Arab and Hebrew sectors. For instance, the enrollment rates at ages 14-17, which increased in Hebrew education from 90.5% in 1990 to 96.1% in 2001, increased only from 62.8% to 80.5% in the Arab sector, i.e., an increase of 6% vs. 28%. In both sectors enrollment rates for female students are higher than for male students (CBS, 2002a: Table 8.11; Sprinzak et al., 2003: Table C9).

Percent of students entitled to matriculation certificate

69. The percentage of students entitled to a matriculation certificate increased from 32% in 1990 to 45% in 2001. Still, gaps exist between the two main sectors: 37% to 50% in the Hebrew sector and 13% to 29% in the Arab sector, with the percentage of female students higher than that of male students in both sectors. Within the Hebrew-speaking sector, the highest percentage is found among Israeli born pupils; among the Arabic-speaking sector, the highest percentage is found among Christian Arabs, a percentage that is similar to the one prevailing in the Hebrew education (Sprinzak et al., 2003: Table C11). These data

show that the goal of attaining matriculation has not been fully achieved yet and it remains one of the main priorities of the Ministry of Education.

Students in higher education

70. There are four types of higher educational institutions in Israel: universities, the Open University, teachers colleges and other regional colleges. In 2002, about 200,000 students were studying in these institutions, double the number in 1990. The highest average annual growth rate in percentage (in the 1990s) is that in the regional colleges (22.5%) but it is also fairly high in teachers colleges (13%). Among the factors affecting this growth, beyond the growth in percent of students entitled to matriculation, are the growing recognition of higher education as a lever for social and economic mobility; the opening of new higher educational institutions - from 21 in 1990 to 54 in 2000 - and their dispersion in all geographical districts; the variety of programs they offer, which has brought new populations into higher education, and the extension of the college preparatory year which enables the entrance of underrepresented groups into the higher educational system.

Bachelor's degree recipients

71. The growth in access to higher educational institutions results in a growing number of academic degree recipients. According to international comparisons, the percentages of Israeli Bachelor's degree recipients (28%) and the percentage of Israeli Master's degree recipients (9%) from the relevant age groups (27-32) are higher than the average of the OECD countries (19% and 5% respectively). The percentage of Ph.D. recipients (1% only) in the relevant age groups is similar to the average of the OECD countries (CBS, 1999c: Table 28).

72. Israeli educational policy, thus, can show a list of successes although gaps in educational inputs and outputs still exist, especially between the Hebrew and the Arab sectors.

2.2 The structure of the educational system

73. The Israeli educational system includes both formal and informal educational frameworks, the former being the largest. The informal educational system consists of youth activities in various social-educational spheres as well as adult education. The formal educational system, as described in Figure 1, consists of the following main levels: pre-primary education (ages 2-6), primary education (ages 6-12), secondary education, which is split into two: lower-secondary education (ages 12-15) and upper-secondary education (ages 15-18). In 2000/1, the total number of pupils enrolled in the formal educational system from pre-primary level to the end of the secondary school, was approximately 1.6 million. Free and compulsory education extends over 11 years from kindergarten to Grade 10 inclusive. The state is also responsible for providing free education to adolescents aged 16-18.

74. In addition, the educational system includes post-secondary and academic higher educational institutions. Post-secondary education is non-academic and includes institutions that provide knowledge and training in a variety of areas such as technology, administration and art as well as some non-academic teachers colleges. Academic higher educational intuitions include universities, the Open University, teacher training colleges and other academic colleges. Figure 2 presents the structure of the post-secondary and academic higher educational levels. In 1999/2000, a quarter of a million students studied in post-secondary education academic and non-academic frameworks.

75. This structure reflects a series of legislations including the 1949 Compulsory Education Act, the 1953 Statehood Educational Act and the 1958 Higher Educational Law, as described above. The Statehood

Educational Act recognized two different types of educational institutions: so-called official institutions and nonofficial institutions, which later on were referred to as independent schools. These informal schools were granted independent administrative and pedagogic responsibilities on the condition that they comply with minimal requirements related to curriculum, learning days, staff-related requirements, etc.

76. The educational system in Israel is directly subordinate to the Ministry of Education and the Director General. At the headquarters level it is organized into several administrative units and at the surface level it is subdivided into six geographically-based units. Teachers' affairs, including employment conditions, social rights such as pension and compensation, are managed by an administrative unit at the headquarters level entitled Teaching Personnel Coordination and Control Administration. Another administrative branch is the Teacher Education and In-service Teacher Training Administration, which deals with teacher education and ongoing professional development. Figure 3 presents the structure of the Ministry of Education.

2.3 Schools in the educational system

77. Most schools in the educational system are public schools,[13] i.e., budgeted by the government, either directly or via local authorities and non-profit educational institutes. The number of private schools is negligible. Schools are divided by their language of instruction: Hebrew in the Jewish sector and Arabic in the Arab sector. A small percentage of the schools, especially at the primary level, are special education schools. Schools vary by level of education: primary schools, most of which cover six years but about a quarter eight years; at the secondary level there are three-year lower-secondary schools (junior-high), followed by three-year upper-secondary schools, although there are some six-year comprehensive high schools. Secondary schools are further divided into two main types: general and technological-vocational. In one-track schools either one of these types of education is provided while in multi-track schools the two tracks are housed together within one school. Following are some data (Table 2.3) on the number of schools in the educational system at three points in time: 1948, the beginning of the 1990s and 2002. As presented in Table 2.3, the number of schools since 1948 has grown 5.4 times in Hebrew education and 13.7 times in Arab education. Since the early 1990s the number of schools has grown by 1.5, in both the Hebrew-speaking and Arabic speaking sectors.

2.4 Students in the educational system

78. This section relates only to students in the educational system under the supervision of the Ministry of Education. In 2001/2, the total number of students enrolled in the public educational system – from pre-primary level to the end of secondary level - reached almost 1.65 million students (306,700 of whom are in pre-primary education) with about one million in primary and secondary Hebrew education and about 300,000 in primary and secondary Arab education. Table 2.4 presents data on the growth in the numbers of students in all levels of public education including primary, lower-secondary and upper-secondary education, separately for the Hebrew and Arab sectors, in the years 1989/90 and 2001/2. Data show more accelerated growth in Arabic-language education than in Hebrew-language education with the main growth, in both sectors, occurring in lower and upper-secondary education. This growth can be attributed to the extension of the Compulsory Education act to reach up to the 10^{th} grade and to free education now covering up to the 12^{th} grade.

[13] The definition of public schools is Israel is not identical to that in the OECD. Public schools is Israel are referred to as those budgeted by the government for more than 50%.

79. Schools resort under different supervision frameworks with autonomous organizational bodies[14]. In Hebrew education these include state-secular supervision, state-religious supervision and ultra-orthodox supervision. In Arab education there are two supervisory bodies: Arab and Druze. Table 2.5, which presents the growth in the number of students from 1990 to 2001 by type of supervision (CBS, 1995), points to a huge growth in the percentage of Jewish students under ultra-orthodox supervision, mainly due to their inclusion in the student census in response to the demand for being financed by the government, and of Arab students in the secondary school level. The percentages of Jewish students under state-religious supervision, Arab students in primary school and Druze students remained fairly steady. Finally, there was a moderate decrease among the Jewish students under state-secular supervision.

2.5 Teachers in the educational system

2.5.1 Size of the teaching force

80. The number of teachers employed in schools is, on the one hand, a function of the number of students in the educational system but it is also affected by the number of hours allocated per pupil, number of pupils in class, and number of teaching hours per working unit. Three separate surveys were conducted in Israel on the teaching workforce. Table 2.6 presents the number of primary and secondary school teachers in the Hebrew and Arab sectors for four school years: 1992/3, 1997/8, 1999/2000 and 2002/3. [15]

81. Table 2.6 shows that the total number of teachers in 2003 increased by 41% compared with the total number of teachers in 1992/3, with a much smaller increase in the Hebrew sector than in the Arab sector (38% vs. 68%). At the primary level increase is 31% (Hebrew education 24% vs. 70% in Arab education) and in the secondary level increase is 56% (Hebrew education 54% vs. 74% in Arab education). This huge growth in the Arab sector is an outcome of two five-year plans implemented in 1988 and 2001 which brought about an increase in the number of classes and teaching posts. The increase in number of teachers is also reflected in the number of Full Teaching Posts (FTP) that rose from 1998/9 to 2002/3 in 28%, with an increase of 24% in Hebrew education as opposed to an increase of 44% in Arab education (Sprinzak et al., 2003: Table A3).

82. In the two last decades, the rate of increase in the number of teachers was higher than that of students, as expressed in a gradual decline in the ratio of pupils per teacher (Table 2.7). Still, this ratio is higher in the Arab sector than in the Hebrew sector, while within the latter the ratio is higher in the state-secular schools than in state-religious schools.

83. Yet, despite the fact that there has been an increase in the number of teachers and a decline in the ratio of pupils per teacher, there is a widespread phenomenon, especially in Hebrew education and in

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[14] The educational system caters the needs of different populations from different ethnic backgrounds and with different degrees of religious observance. Thus, these populations study in separate schools supervised by different inspectorate bodies. While all these inspectorate bodies are under the supervision of the Ministry of Education, the ultra-orthodox stream is the most autonomous one with its own curriculum which includes a huge proportion of religious studies.

[15] Data for the years 1992/3, 1997/8 and 1997/8 are based on three teaching staff surveys in primary and secondary education (CBS, 1994a; 2001e; 2002d). Data for 2002/3 are taken from a publication based on the Ministry of Education's budget proposal for that year (2003b).

lower-secondary schools, of teachers teaching only part time. This state of affairs is reflected in Table 2.8 which presents the ratio between number of teachers and full time equivalent posts (FTP). Whenever there is a surplus of teachers, this ratio is higher than 1. As noted in the Table the ratio in most levels of education is higher than one with the exception of upper-secondary schools in Arab education. It should be noted that these data refer only to teachers getting their salaries directly from the government and not from any organizational bodies outside the educational system.

2.5.2 Composition of the teaching force

84. Table 2.9 presents data regarding changes in the percentage of teachers at three points in time (1993, 1998, 2000) in relation to several characteristics: gender, age, years of experience, level of education, and percent of unqualified teachers. Data are presented separately for the Hebrew and Arab educational systems and for primary (not preprimary) and secondary education.

Women in the teaching force

85. The overall percentage of women in the teaching force at the primary level is high and remains stable over the years, although it is much higher in Hebrew education (90%) than it is in Arab education (54% in 1993 and 66% in 2000). In secondary education the percentage of women in the teaching force is lower than in primary education but it has been increasing steadily (from 61% to 69%), with a more notable increase in the Arab sector (30% to 38%) than in the Hebrew sector (70% to 74%).

Age and years of experience of the teaching force

86. The teacher population has aged in the last two decades, especially in the Hebrew educational system; a tendency that is expressed in the higher proportion of teachers above the age of 50. In Hebrew secondary education there are almost twice as many old teachers (50+) than young teachers (up to 29). Yet, in Arab education this picture is reversed. Since age and years of experience are typically correlated, the median years of experience in Hebrew education is higher than that in Arab education; in both sectors a lower mean is found at the primary level than at the secondary level.

Academic degrees among the teaching force

87. Between 1993 and 2000, there was a 50% increase in the number of teachers holding an academic degree, with 60.5% of the teachers holding an academic degree in 2001 as opposed to 40.7% only in 1993. This increase is much more significant in primary education (100% in Hebrew education and 150% in Arab education) than in secondary education (20% in Hebrew education and 23% in Arab education) (CBS, 2002d). The notable increase in teachers with an academic degree at the primary level can be attributed to the academization of teachers colleges which mainly prepare primary teachers.

Unqualified teachers in the teaching force

88. Three types of certified teachers exist in Israel: a "certified" teacher, who is a graduate of a two-year seminar program, usually an ultra-orthodox one; an "advanced certificate" teacher, who is a graduate of a three-year teacher education program, usually in a state-religious seminar; a teacher holding a B.Ed. and a teaching certificate, who is a graduate of a four-year academic program, or a teacher holding a first degree and a university teaching certificate. Unqualified teachers were defined in previous surveys as teachers who hold either an academic degree or a teaching certificate. These definitions do no longer obtain in the educational system in which teachers holding an academic degree but lacking a teaching certificate are not considered qualified. A teaching certificate is the minimum requirement to be considered

a qualified teacher at the primary level. At the lower-secondary level, a first degree is also needed in addition to the teaching certificate. At the upper-secondary schools, a second degree in the field of teaching is already required according to the more stringent criterion, or a first degree, according to the more lenient one.

89. The percent of qualified teachers increased from 84% in 1991 to 92% in 2001 in primary education and from 33% to 70% at the lower-secondary level. At the upper-secondary level there was an increase from 34% to 67% according to the more lenient criteria and from 8% to 24% according to the more stringent criteria. These latter percents mean that only a quarter of the upper-secondary teachers hold a second degree in their subject area although the percent varies from one school subject to another.

Immigrant teachers in the teaching force

90. A unique phenomenon in the Israeli educational system relates to the integration of immigrant teachers, mostly from the Former Soviet Union (FSU), into the teaching force. Out of the total number of immigrants in the 1990s, 5%, i.e., about 50,000, declared they were qualified teachers, mainly in math, science and music. However, since teaching methods vary greatly between Israel and the FSU, integrating these teachers required not only their screening but also their retraining and preparation for the Israeli system. Since the early 1990s, about 9,000 of these teachers were trained and about 6,000 were integrated into the formal educational system. Yet, many immigrant teachers are also teaching in non-formal educational institutions. This teacher population is highly educated, knowledgeable and experienced. Immigrant teachers are supported by the Ministry of Education until they are fully integrated in the educational system (Ministry of Education, 2002b, Circular 62/10).

2.6 Teachers unions

91. Israeli teachers are represented by two professional teachers unions: *Histadrut Hamorim*, the national teachers union, and *Irgun Hamorim*, the Association of Secondary School Teachers (ASST). Both unions are highly structured and strongly participatory. They represent the interest of all teachers in all levels of education and thus constitute a powerful body. The Histadrut, founded in 1903, currently represents about 100,000 members including kindergarten teachers, all the primary school teachers, 20% of the secondary school teachers, about 90% of education-related inspectors, directors, and government officials, and teacher educators in colleges of education. The ASST, established in 1958, has some 40,000 members, 80% of them secondary teachers.

92. The Histadrut Hamorim is Israel's' largest public sector union and part of the National Labor Federation. In its early days, anyone with an interest in education could join. Today, admission is restricted to those with a teaching certificate who teach at least a one-third job and whose work is primarily pedagogical, not administrative. Membership fees are obligatory, and members are expected to abide by the decisions of the union.

93. Although this union is politically affiliated, it is an autonomous body that makes decisions regarding economical policy for the benefit of its members; the union is allowed, by decree, to declare labor conflicts (Gaziel & Taub, 1992). During its early years, the Histadrut functioned as an autonomous professional body determining educational policy and professional norms. Since statehood in 1948, many of the roles the Histadrut fulfilled were transferred to the Ministry of Education and the Histadrut became more of a professional union (Israeli, 1999). In this regard, the Histadrut focuses mainly on the improvement of teachers' welfare, salary and working conditions. This focus also characterizes the functions of the ASST.

94. From its establishment the ASST aimed to defend teachers' rights and has always focused on the improvement of teachers' welfare, salaries and working conditions. It succeeded gaining the support of many teachers even though it was established through a struggle with the already existing union. The ASST is smaller than the Histadrut, less centralized, and less politically partisan. In addition, its members are university graduates who perceive themselves as having a higher professional status than that of their colleagues from primary schools who are college graduates. Being an apolitical organization, the ASST is more radical in striving for the improvement of teachers' salaries and condition and is constantly trying to detach itself from collective salary agreements and put the status of its members on a par with that of other professionals such as engineers and lawyers.

95. Over time, the two unions began to cooperate in confronting the government regarding their salary agreements, working conditions and social rights. Since 1990, in addition to their joint tendencies to improve salaries and working conditions, both unions have tended to return to professional issues. In this regard, both try to affect educational agendas, having an impact on teachers' professionalization, and being involved in determining educational priorities such as the core curriculum, in-service programs and school autonomy. These professional concerns are often in contrast with their struggles towards better working conditions, usually ending with the unions opting for the latter. Such was the case when both unions objected to an additional two weekly hours of compulsory school-based in-service training even at the cost of giving up the additional salary that was offered to them (Yonai, 1999a). The unions' reduced professional concern was also evident when both unions relinquished the implementations of the Etzioni committee which meant to improve teachers' status (Israeli, 1999).

3. ATTRACTING COMPETENT CANDIDATES FOR TEACHING

96. This chapter deals with how the Israeli government guarantees the supply of capable candidates for teaching and describes the possible routes of entering teacher education programs and the teaching profession itself. Special attention is given to the different ways in which the government tries to improve the quality of teaching candidates.

3.1 The problems of quantity and quality of the teaching force

97. The historical development of the Israeli teacher education system can be discussed with reference to two issues: teacher shortage and the quality of teachers. In times of teacher shortage, the main problem is teacher supply while in times of a balanced demand and supply, the main problem is that of the quality of teachers. Teacher education reforms, initiated by public committees, were generally the response, usually focusing on one problem at a time. Thus, some of the deficiencies, addressed by one committee, were mainly the outcome of previous reforms initiated by another committee.

98. Problems of quantity were mainly characteristic of the early years of Israel's statehood and also of the peak periods of mass migration (early 50s, 70s and 90s). The mass migrations which created an overall shortage in teachers and especially in teachers with the same demographic background as those of their immigrant students. Typical solutions to quantity problems were, and still are:

- Shortening the teacher training period.
- Creating emergency rapid-training programs (e.g., training soldiers to become teachers).
- Lowering the admission requirements for the teaching programs in order to admit as many students as possible.
- Extending the target populations of teacher candidates (such as high-school students in pedagogical streams, students without a high school diploma, academics) and retraining other professionals.
- Opening more varied and attractive teaching programs.
- Opening one-year or two-year secondary teacher teaching programs at the universities.

The result of such a responsive treatment often was a decrease in the quality of teachers.

99. Over the years, quality problems with the teaching force were confronted via the establishment of public committees whose mission it was to suggest ways for improving the quality of the teaching force and help raising the status of the profession (e.g., Ben-Peretz, 2001; Dan, 1981; Dushkin, 1961, Etzioni, 1979; Peled, 1976, Rimalt, 1966). The suggestions made by these committees tended to include an *administrative aspect* meant to improve the quality of teaching candidates, as well as a *pedagogical and academic aspect*, intended to improve the teacher education programs themselves, especially in teachers

colleges. The increase of cost involved in these recommendations tended to be balanced by recommendations to reduce the number of teachers colleges by merging institutions on the basis of need analysis. Not unexpectedly, the suggestions for quality improvement made by the various committees included similar elements:

- Raising the admission standards for the teacher training programs.
- Lengthening the programs: from a two- year to a three- year program, and then from a three- to a four- year program.
- Boosting the attractiveness of the teaching programs by adding new specializations and tracks, such as counseling, diagnostics and information technology, in order to attract a more varied population, including men.
- Attracting academic candidates by opening programs aimed to re-direct university graduates into teaching.
- Offering scholarships and study benefits.
- Improving the quality of the teacher training programs and the teacher-training staff via academization processes.
- Guaranteeing the quality of the preparation programs by setting high learning standards and by unifying requirements, certification and licensure criteria.
- Paying special attention to the induction period of new teachers and to the process involved in the absorption of graduates in the field.
- Creating a licensure mechanism dependent on an ongoing evaluation of teacher adequacy during a probation period.

100. Compared to the abundance of committees that dealt with the scrutiny and improvement of the teaching programs at the teachers colleges, the number of committees that dealt with the teaching programs at the university level was significantly lower. In the late 1980s, a committee was appointed by the Commission of Higher Education to study teacher education programs at the university departments (Elkana Committee, 1988). The committee concluded that the teacher education programs at the universities do not receive the priorities they deserve. It was, therefore, recommended that these programs become more central and dominant in the universities' education departments both in terms of administration as well as in the academic agenda of these departments. More specifically, the committee made the following recommendations, which were only partially executed:

- Diverting senior academic staff to teach in teacher education programs and to promote research in this area.
- Selecting appropriate personnel to train students in the schools (and remunerating them appropriately).
- Extending and deepening both the practical and theoretical aspects of teacher education programs and combining them.

- Establishing in-depth relations between academic departments of education and the schools where students are practicing.

- Reconsidering the structure of the teacher education program in universities with a preference of the following models: a four-year-program with two major subjects; a three-year-program with one major; and a one-year-program following the BA degree instead of a two-year-program in parallel with the BA degree.

- Co-examining with the Ministry of Education the strengths and weaknesses of the various models of teacher education programs in use at the universities and in the colleges.

- Re-evaluating the diploma programs for school principals and strengthening the pedagogical elements of these programs and their connection with school reality.

101. Further reference to the teacher programs at the universities can be found in Ben-Peretz Committee (2001) whose recommendations in this regard dealt mainly with organizational issues including hierarchy matters and delineation of future activities, and to a lesser extent with actual pathways for improvement of the programs. The committee approved of opening teacher education tracks in higher educational institutions (i.e., regional colleges) which were not meant, originally, to train teachers. Furthermore, the committee suggested a long-term re-organization of the planning, budgeting and monitoring of all teacher education institutes (universities, colleges, and seminars), conditional on the approval of the Ministry of Education and the Ministry of Finance, in a similar way to what occurs in the higher education system. These recommendations strive to create an autonomous statutory organization which will be budgeted directly by the government parallel to the commission for higher education and will deal specifically with academic institutions of teacher education. Further recommendations aimed at mapping and merging teacher education institutions depending on their geographical location, specialties and needs of different sectors. These recommendations were slowly implemented only regarding colleges of education and not regarding departments of teacher education at universities.

3.2 The various routes of entering teacher education

102. There are two main routes for entering a teacher education program and students in both are considered to be regular students. The first approach is the initial training through the "main door", i.e., students who enroll to colleges of education or university departments, or who decided to join the teaching profession and to obtain a teaching certificate via retraining programs. The latter group may do so either by applying to a teachers college or to a department of education at a university.

103. The second route is through the "back door": here teachers without any training in education enter schools as unqualified teachers and only then go through alternative processes of official certification via in-service and testing mechanisms. This phenomenon is most common among university graduates who start working at the high school level and receive their pedagogical training while working. This route also includes teachers who train in a shortened preparation program, usually in response to an urgent need for teachers (e.g., Bedouin teachers for the Bedouin schools).

104. There is controversy as to the quality of these routes: the first route, which is a four-year one accompanied by an induction year, is preferred for its extensive professional preparation while the second is preferred for its low cost and due to the claim that university graduates, whether trained or not, are always preferable (Klein, 2002). This debate echoes a similar dispute in the US and elsewhere.

3.3 The change in number and composition of student teachers

105. There has been a gradual but constant increase in the number of applicants to the teaching profession at the colleges of education (from 5,968 first-year students in 1995, among them about 1,000 ultra-orthodox Jews, to 8,849 first-year students in 2001, among them 2,428 ultra-orthodox) and a steady number of applicants at the universities over the past ten years (about 1,000 first-year student teachers each year) (Table 3.1). In 2001, for every student at the universities, there were seven students at the colleges, training to become teachers. The table points also at a steady increase in the number of ultra-orthodox students over a period of seven years (from 17% to 27% of the total first-year students) and an increase in the number of Arab students in that period (from 3% to 7% out of the total first-year students).

106. University student teachers have been found to differ from college student teachers in their demographic and academic variables. Ayalon & Yogev (2002)[16] compared several populations, among them 139 students studying teaching and education in six universities, out of which three are elite and three are population-targeted universities, and 462 student teachers in six colleges of education. Results showed significant differences between these two student populations according to which there are more student teachers in the colleges compared to the university, who come from a Middle-Eastern background (43% vs. 26%); from peripheral towns (48% vs. 21%); and from a religious background (47% vs. 20%). There are also more Arab students in the colleges as opposed to the universities (13% vs. 3%) but less immigrant students in the colleges (6% vs. 17%). Significant differences between these two populations can also be found when comparing their academic profile, with the university students outperforming the college ones in terms of their matriculation grade point average (95 vs. 87) and their psychometric test scores (592 vs. 527).

107. Furthermore, according to Ayalon & Yogev (2002), when comparing the demographic and academic profiles of university students who study teaching or education versus students enrolled in other fields of study, significant differences emerge. Results indicate that, among those who study teaching or education there is a higher percentage of women (94% vs. 62%), and of students from Middle-Eastern origin (26% vs. 18%). The academic profile differs as well, with a higher average grade in the psychometric exam among those who come from non-education related fields of study (661 vs. 592).

108. Additional analysis (Wexler & Maagan, 2002) shows that the mean grade of admission tests among those student teachers who integrated into the teaching profession is lower than the mean grade found among those who graduated but did not integrate into the profession. This is further proof of the low academic profile of teacher education candidates and especially among those who graduated and went into work.

109. Further data showing that students studying at the colleges of education are not among the elite can be seen when analyzing the percentages of students whose mothers received an academic education and who come from large families with many siblings (Table 3.2). As noted in Table 3.2, the percentage of students whose mothers have an academic background is fairly low in the non-religious sector (17%-19%)

[16] Ayalon & Yogev (2002) compared students from 28 institutes: 3 elite universities aspiring for academic excellence (including the Hebrew University, Tel-Aviv University and the Technion; *N*=714), 3 population-targeted universities serving specified sectors in the population (including Ben-Gurion University, Bar-Ilan University and Haifa University; *N*=1,038) and 22 colleges and extensions of universities (*N*=2,294), out of which six are teachers colleges (*N*=462). It should be noted that samples were drawn from specializations that exist both at universities and in the colleges, and did not aim to be representative of the total student population at the universities. Data were collected in 1998.

and "ultra-orthodox" sector (15%-18%) as opposed to the religious sector in which a much higher percentage was found (40%-44%). With regards to number of siblings, this percentage is much lower in the non-religious sector than in the religious one with the highest number in the ultra-orthodox sector. These figures have remained stable over the years.

110. It can be concluded that the portion of students opting for the teaching profession is not among the elite of all students applying to higher education. Students with higher entrance exam grades tend to apply to other faculties and choose different professions. Students applying to the teaching profession are mainly women, with a higher percentage of Jewish students from Middle-Eastern origin, from peripheral regions and from religious and traditional backgrounds. It seems that the reasons for the above populations to apply to teachers colleges are varied: teachers colleges, some of which are religious, provide higher education for populations with lower admission grades as well as for religious populations who object to secular higher education on religious grounds. In addition, teachers colleges give access to vocational education for students from lower socio-economic strata who are interested in a quick and relatively easy way to integrate into the workforce. Because colleges of education are widely spread throughout the country, they tend to attract students from peripheral towns, many of them with lower socio-economic status and little chance of getting accepted to the elite universities. At any rate, this is the work force pool from which quality teachers are groomed, which is an additional challenge for the educational system in Israel.

3.4 Integrating into the job market upon graduation

111. Thousands of students are trained per year, by colleges of education as well as by universities, to become teachers in the education system. In 1997, a survey was conducted, to investigate the integration of graduating teachers into the workforce (CBS, 1997a). Three types of populations were surveyed: (1) final year students in non-academic institutions in the years 1992-1994; (2) B.Ed. graduates in the years 1990-1995; and (3) university graduates with a teaching diploma in the years 1990-1994. The above three types of graduates were matched with teachers' lists in the official educational system in the years 1991-1995, in all levels of education including formal and non-formal frameworks. The 'matched' graduates were defined as employed.

112. Tables 3.3, 3.4 and 3.5 present data on the integration into the teaching labor market of the three populations described above. The tables present the number of graduates from each population in several consecutive years, the total proportion of those employed as teachers, and a breakdown of this percentage by the interval between graduation and the first year of work. As mentioned in the tables, the overall percentage of graduates that entered into the workforce ranges from 50% to 80% among all three populations over the years. While the percentage of those entering work among the non-academic college graduates decreases over the years (from 70% in 1992 to 56% in 1994), there is an increase in the percentage of B.Ed. graduates who enter work (from 64% in 1990 to 79% in 1994). The percentage of university graduates who enter work fluctuates but is usually lower than that found in the academic colleges. In addition, in all three types of populations, most graduates enter work in their first year upon graduation. This percentage increased over the years among the academic college and university graduates. Of those who started work in all three populations, about 80% remain working for at least five years.

113. More recent data on the integration of graduates of initial teacher training programs, both at the universities and at the colleges, into the workforce appear in Table 3.6 (CBS, 2003a: Tables 4a, 4b). In contrast with the above data, current data show that in the years 1995-2000 the percentage of newly

appointed teachers[17] who integrate into the workforce in the first year upon graduation is lower than in previous years and ranges between 24% and 35% of all newly appointed teachers. There is, thus, a decline in the percentage of students who integrate into work one year after graduation. This might reflect a decline in the motivation to start working immediately after graduation. An alternative explanation is a result of a shortcoming of these data that reflect only newly appointed teachers who receive their salaries from the government. Since there was no increase in the allocation of teaching hours in the public education system many teachers applied to the private sector, a tendency that is encouraged by the government.

3.5 Teachers' views of the teaching profession: a life-long career or a short-term one

114. Only few studies in Israel dealt with the extent to which teachers perceive their profession as a life-long career or as a short-term one. Kremer-Hayon and Hoffman (1981) found that the tendency to drop out of teaching is mainly related to teachers not developing a professional identity. Friedman and Farber (1992) found that 25% of their teacher respondents (N=641) reported that they considered leaving the teaching profession, 50% claimed to be burnt out, 42% stated, with different levels of agreement, that they would not have re-chosen the teaching profession if they were to start their professional careers all over again. The tendency to leave the profession is perceived by those researchers as an expression of burnout and was found to correlate with teachers' self-image and degree of work satisfaction.

115. Further data were found in an international study (TIMSS-1999, 2000a, 2000b) conducted among math and science teachers. In this study, most teachers claimed that the teaching profession was their first choice (74% among the math teachers and 68% among the science teachers). Yet, 36.5% among the math teachers and 47% among the science teachers stated that they would change their career if they could. From the above mixed results it can be concluded that many teachers would have preferred to leave the profession. However, it seems that most of them do, in fact, stay in the profession until retirement.

116. In a research study that investigated the professional commitment of teachers from various fields and their dedication to the teaching profession, it was found that most teachers, typically women, did not initially plan or decide to become teachers. In other words, few expressed an intention to become teachers at a young age. Nonetheless, most of them (about 80%) declared loyalty and commitment to the profession in high and medium levels and were convinced that this was the exact route they would have chosen had they had a chance to choose all over again. Viewing teaching as a mission is an important factor in high levels of commitment and differentiates highly committed teachers from those of medium or low commitment to teaching. Most of the women teachers in that study declare that a commitment to teaching complements other commitments of parenthood and family (Schrift, Nasser, & Hayshrik-Amusi, 2002).

117. Additional data on the degree of teachers' commitment to teaching were gathered from a recent survey initiated by the teachers unions (Smith and Pniel, 2003). Out of a sample of 600 teachers responding to the question of what drives them to continue and work as a teachers, 44% responded that they feel satisfaction working in respected profession, 36% responded on a feeling of a mission and 20% mentioned a variety of reasons, most of them have to do with convenience. The percentage of teachers with the feeling of mission is higher among upper elementary teachers than among primary school teachers (45%) while their feeling of satisfaction in respected profession is lower than in the higher groups (34%). In another question, also related to their teaching career, teachers were asked whether they would have

[17] Newly appointed teachers are defined as teachers that appear in the salary files of the Ministry of Education during the years 1995-2001 and have one year of experience as teachers. Among them are those who integrated into the workforce in the first year upon graduation as well as those who graduated in previous years.

recommended youngsters to choose teaching as a profession. More than half (56%) answered positively with higher percentage among upper primary and state-religious teachers. Responses to general questions about being proud in their profession, 81% declared that they are extremely proud or proud in being teachers.

3.6 Teachers' salary structure

118. Budget allocation analysis of the educational system reveals that teachers' salaries are the single largest factor in the cost of providing education, accounting for about 75% of the total expenditure. Therefore, because of fiscal constrains, teachers' salaries are unlikely to change (Globerson and Ben-Yishai, 2001), and indeed, recommendations made by a number of committees to raise teachers' salaries (Zussman committee, 1989; Etzioni committee 1979) were only partially realized. This is one of the reasons for the ongoing crisis related to salaries which often result in teachers strikes (Israeli, 1999).

119. Official pay scales are uniform and apply to all teachers in all levels of education including kindergartens and colleges of education. As part of the civil service system, teachers' salaries are based on formal academic qualifications and years of experience with 36 years being the maximum. Salaries of full-time beginning teachers range between 2,324 NIS for certified teachers to 3,026 NIS for teachers holding a Ph.D (Salary scales, 1.9.2002). After 10 years, salaries increase by 42% (3,306 NIS for certified teachers and 4,303 NIS for teachers holding a Ph.D.). After 15 years of work, salaries range from 3,649 NIS for a certified teacher to 4,751 NIS for to a teacher holding a Ph.D., an increase of 57%. At the end of the career, although there is an increase of 113% (4,963 NIS for qualified teachers and 6,461 NIS for teachers holding a Ph.D.), these salaries are still lower in comparison to the earnings of other workers, even those with equivalent qualifications (Teachers Unions, 2003).

120. Tables 3.7 and 3.8 demonstrate the salary inferiority of teachers compared with other professions. According to Table 3.7, the average wages of a salaried employee in education in 2001 were 81% of the average wages of a salaried employee in Israel. While, in 1999/2000, there was an increase in the monthly wages of employees in Israel of 11% in current prices, the monthly increase of employees in education was only 10% in current prices. When comparing the growth in teachers' salaries with the growth of salaries of persons holding other liberal occupations in the years 1997-2002 (Table 3.8), it is evident that while the increase in all salaries is low, e.g., physicians, social workers and teachers, the average salary of teachers is always the lowest of all the liberal profession which appear in the tables.

121. Some tend to justify teachers' low salaries as a by product of their low weekly working hours. The average number of weekly working hours of an employee in primary education is 25, in comparison with 36 hours of an employee in the labor market. It is also low when compared to similar occupations such as health, welfare and social workers who work 32 hours on average per week (CBS, 2002a: Table 12.16). In 2000, the average weekly hours for teachers in primary education stood on 23 and 21 weekly hours for teachers in secondary education. In both levels of education, teachers in the Arab sector worked 2-3 hours more than their counterparts in Hebrew education. However, these hours in both sectors do not include all other teaching-related duties that are part of teachers' routine work such as lesson planning and preparation, test checking, conferences with parents, etc. To conclude, teacher's salaries are low compared with similar occupations that require similar training, and when considering the workload involved in the teaching profession, teachers' salaries are not attractive.

122. Two approaches are taken by the educational system to compensate its workers for the unified official pay scales. The first approach is a reduction in the number of teaching hours for teachers in higher levels of education, i.e., the full weekly teaching load of primary school teachers equals 32 hours while only 24 for a secondary teacher and 16 hours for teachers in colleges. The second approach is the awarding

of monetary incentives to teachers who hold different types of administrative functions within their school such as coordinators, homeroom teachers and counselors which increases salaries by 2% to 10%; or to teachers who pursue an on-going professional development in the form of in-service training which may increase salaries by up to 30%. Yet, even with these incentives, teachers' salaries are still in an unfavorable position relative to other qualified professionals.

3.7 Improving the quality of applicants to the teaching profession

123. Based on the above information regarding those who enter initial teacher education - i.e., low admission characteristics, medium integration into the labor market, low and non-tempting salaries that do not attract high quality candidates and the desire of between a third to half of the practicing teachers to change their career if it were possible - attempts are being made to change this state of affairs. Yet, since it is impossible to radically increase teachers' salaries, these attempts indirectly aim to increase the status of the teaching profession and thus its appeal. In this respect, a number of initiatives were taken by the Ministry of Education to improve the quality of applicants to the teaching profession. These include the promotion of the academization process, raising the entrance requirements and attracting excellent students.

3.7.1 The academization process

124. During the 80s and 90s, the main effort to improve the quality of applicants to the teaching profession was through the academization of teacher education and the teaching profession. In 1979, in light of a perceived deterioration in teachers' status and working conditions, a committee, headed by Judge Etzioni, was appointed by the Minister of Education to investigate the status of teachers and the teaching profession. One of the committee's recommendations was to firmly place the teaching profession on a basis of professionalism, pedagogical independence and academization. Turning the colleges of education into academic institutions was supposed to increase the prestige of the profession, bring its status to a par with other prestigious professions such as medicine and law, and therefore, to attract higher-quality candidates. Following the committee's recommendation, the Commission of Higher Education decided that colleges of education would be allowed to grant an academic B.Ed. degree after four year of studies, either independently or in collaboration with a higher-education institute. In 1981, the process of academic accreditation of teachers colleges began. This process went through two stages. The first consisted of gaining permission to establish an academic track and the second was accreditation. A special committee, appointed by the Committee of Higher Education, published guiding principles to ensure the academic level and curricular unity of teachers colleges.

125. The academization process accelerated over the years and while until 1999 it was on a voluntary basis and initiated by colleges of education themselves; from 1999 onwards academization became compulsory with all teachers colleges being required to offer a full four-year academic program. Table 3.9 shows the accelerating process of academization of the colleges of education. In 1985, only 8% of students studied towards an academic degree while in 2001 this percentage rose to 60%. At the same time, the number of students studying towards a non-academic degree (certified and advanced certified teacher) dropped from 100% in 1980 to 40% in 2001. The number of students in academic tracks in Hebrew institutions grew from 37% in 1984/90 to 57% in 2001/2. The number of Arabs students studying to become teachers increased from 576 in 1989/90 to 3,102 in 2001/2 (CBS, 2002a). In 2001/2, 85% of the Arab students studied for academic degrees (Sprinzak et al., 2003 D6). This latter figure cannot be compared to 1989/90 since there were no academic colleges at the time.

126. An additional initiative, following the academization trend, is the opening of M.Ed. programs in teachers colleges. This initiative was approved by the Commission of Higher Education in 1999, and in

2001, a committee on behalf of the Commission was appointed to approve the M.Ed. programs. About 20 academic teachers colleges applied for this accreditation but only three of them, so far, were approved. It should be noted that this step is regarded as vital to the continuing academization process of teachers colleges, which was, so far, handled in a sluggish way encountering many obstacles from the Commission of Higher Education, amongst them requirements for academic characteristics of the teaching staff and reservation regarding the academic domains to be approved for initiating these M.Ed. programs.

3.7.2 Raising the entrance threshold

127. Simultaneous to the academization of the teachers colleges, other recommendations made by the Etzioni committee were taken care of, one of them the recommendation to raise the admission threshold of the colleges. In 1980, a national standardized entrance exam was first administered for screening purposes in all colleges of education – the so-called Saf exam, whose scale ranged from 1 to 120 with a cut-off score of 80. In addition to the entrance exam, a selection mechanism on the basis of personality traits and interpersonal skills came to be internally administered in each college, adding to the predictive validity of the selection procedure. This was intended to balance the academic emphasis of the Saf exam. Over the years, there have been many changes to the test itself. While it was originally devised as an intelligence test in the form of Wechsler scales, it changed to examine the type of academic skills that students will encounter during the course of their studies. At present the test has four components: mathematics and geometry, logical reasoning, Hebrew grammar and reading comprehension, and English for academic purposes.

128. It should be noted that a student may be admitted to a college of education on the basis of his or her psychometric exam score, which is used at the universities. The cut-off score in the psychometric exam is 450 points on a scale ranging from 200 to 800. While most applicants to the teachers colleges (60%) take the Saf exam, 40% of the applicants choose to take the regular psychometric exam used at the universities. A comparison of the admission scores between these two groups shows that candidates who opted for the Saf test receive lower admission grades than those who were tested by psychometric exams. Furthermore, a decline was noted in the mean score of those taking the Saf exam over the past few years (Wexler & Maagan, 2002).

129. In 1997, it was suggested by the Department of Teacher Education and In-service Training at the Ministry of Education that the grade point average in the high-school-matriculation exam be used as an additional entrance indicator. In 1998/9, the idea was piloted and a new score, which combined Saf exam and high-school-matriculation, was used. The pilot proved successful as it allowed a more meticulous screening. Since 2000 the combined score is in use in all colleges of education. In 2002 a new cut-off score was set: 85 instead of 80 in the Saf exam, or 485-490 instead of 450 in the psychometric exam, allowing for a more stringent selection to the teaching profession (The Department of Teacher Education and In-service Training, Ministry of Education).

130. Presented in Table 3.10 are the Saf frequency scores of all candidates admitted to the colleges as freshman during the years 1997-2003. The figures show that there is a decrease over the years of students with a cut-off score lower than 80 and an increase of students with a cut-off score above 90 starting from 2000, i.e., equivalent to 524 in the psychometric exam, the latter category at present makes up 44% of the student population. Nonetheless, it should be noted that raising the admission requirements of the teacher applicants does not guarantee higher-quality teachers.

3.7.3 Attracting excellent students

131. In addition to increasing the quality of applicants via upgrading the entrance requirements, a new initiative on behalf of the Department of Teacher Training and In-service Training at the Ministry of Education began in 1999 that aims at attracting excellent students with exceptionally high entrance scores to the teachers colleges, by offering them an individually tailored and challenging program. The aim was to reach about 5% of the total number of student teachers with the intention that these will eventually become educational leaders.

132. The admission requirements to this program include an entrance score of at least 100 on the Saf exam or an equivalent score of 600 in the psychometric exam, and successfully passing the screening committee. The program itself is a three-year-program (instead of a four-year program but with the same amount of hours) which is individually tailored to each student. In addition to the regular teacher education program, student teachers in this stream are being trained to undertake a central role in schools, to become community leaders, to help students with learning difficulties and to be teaching assistants in the colleges. The program includes regular courses as well as courses especially aimed at these excellent students. Learning is a mixture of self study and tutorials. The fourth year is an induction year. The benefits of this program include full study scholarships and priority in job appointments. The diploma received upon conclusion of these studies states that the graduate was part of this specific program.

133. At present, the program for excellent students is being run in 19 colleges of education and the number of participants has gone up from 73 in 1999 (in four colleges at the time) to 281 first-year-students in 1993 (and 813 students in total, in all three years) (see Table 3.11). No hard data are yet available as to the success of the program itself but a number of internal evaluation surveys conducted at the college level attest to high satisfaction among the participants and show a high percentage of integration in the teaching profession (Libman, Mishal & Ackerman, 2002).

4. EDUCATING, DEVELOPING AND CERTIFYING TEACHERS

134. This chapter deals with issues related to teacher education, development and certification. More specifically this chapter looks at major concerns about initial teacher education certification and licensure, the institutions involved in it and the various types of professional development of teachers.

4.1 Major concerns about teacher education and certification

135. The nature of teacher education is influenced by various factors, such as the way the teaching profession is perceived i.e., as a craft or an artistic endeavor; as a profession or a semi-profession; or the way teachers' role is perceived, i.e., as a rational technician or as a reflective practitioner, as solely focusing on nurturing learners' intellectual abilities or as addressing their whole personality and preparing them for life in society (Eisner, 1994; Etzioni, 1969; Huberman, 1993; Lortie, 1975; Pratte & Rury, 1991; Schon, 1983).

136. These dichotomies lead to two possible approaches to teacher education. The first is reflected in a professional academic preparation, conducted mainly in higher education institutions with an emphasis on a broad academic knowledge base in a given discipline as well as in the disciplines of education. This approach receives further support in today's postmodern era which is characterized by workers' high mobility from one profession to another, so that they are in need of a common core of general education to facilitate this mobility. The second approach leads to a professional preparation conducted mainly in academic colleges of education with an extensive component of practical preparation within the schools; it is geared towards a holistic education including cognitive, emotional and value-laden dimensions.

137. These two approaches dictate different policy agendas. However, each of these two approaches constantly attempts to include some of the unique components of the other approach. In other words, the academic approach tries to establish partnership with the field (PDS),[18] while the practical school-based approach tries to add an academic flavor to its curriculum.

138. Choosing to focus on either one of the approaches or on their integration, leads to a series of additional decisions concerning the preparation program and its sequencing that needs to be addressed by educational policy makers. These decisions relate to questions such as whether pedagogical and disciplinary studies should occur simultaneously (the so-called *concurrent* model common in the colleges of education) or consecutively (the university model), and whether the preparation program should focus on generic pedagogical knowledge or content-specific pedagogical knowledge. It has been noted that even in the consecutive academic model, which keeps separate disciplinary and pedagogical studies, the pedagogical studies should be content specific, especially if aimed at preparing teachers for secondary grades.

139. Another factor affecting the nature of teacher education is the growing demand for higher education and the extension of the role of universities beyond that of *knowledge production* and dissemination to a more instrumental one of *knowledge use* in different professions. Although these two

[18] PDS – Professional Development Schools.

roles seem contradictory, this is not necessarily so since viewing academic education as fostering rational, independent and critical thinking and exposing students to this culture means an intellectual gain whether one is aiming towards academic or towards professional streams (Kfir, 1999).

140. This rationale justifies both the expansion of universities into practical and vocational preparation as well as the claim of teachers colleges to expand their role and to act as institutions offering general higher education. This unremitting tension between a professional-practical or theoretical orientation can be found also in the debates of the most recent teacher education evaluation committee in Israel (Ben-Peretz, 2001) which focused, among other things, on whether to allow teachers colleges to provide academic streams and, conversely, higher education institutions to provide vocational training. This issue was eventually sorted out as a result of the committee's willingness to make specific exceptions in certain cases for both types of institutions.

141. An additional factor influencing the nature of teacher education is the decentralization and privatization tendencies that have invaded the educational system. With the growing diversity of school-subjects offered by schools as a response to the varied and ever-changing priorities of the educational system, it has become less centralized, giving more freedom to teacher education institutions in deciding on both pedagogical and administrative matters regarding teacher education, while keeping control over the teacher education discourse through standard setting, licensure and certification mechanisms, testing and supervisory devices. An example of this decentralization tendency is granting schools the authority to evaluate last-year's teaching candidates before final certification.

142. In conclusion, the main concerns in teacher education are a result of both intrinsic factors, i.e., the nature of the teaching profession, and extrinsic factors related to the growing demand for higher education and to the power relations among different stakeholders, who are involved in teacher education. Thus, the following decisions must be made about teacher education programs:

- Should teacher education be considered academically oriented, or rather as a vocational preparation and hence more practically oriented?
- Should teacher education be conducted at universities or at colleges?
- Should the pedagogical component in teacher education be considered as content-specific or generic?
- Should a concurrent model or a consecutive model be implemented?
- Is teacher education to be considered subordinate to the Ministry of Education, which is also the direct employer of teachers, or as subordinate to the Higher Education Commission, or alternatively, as autonomous?

Another concern of teacher education is related to planning its size based on forecasting models that take into consideration the ongoing dynamics of the teaching force.

4.2 Initial teacher education and institutions involved in it

4.2.1 Different routes of initial teacher education

143. Initial teacher training through the "main door" takes place in two types of institutions: in colleges of education (formerly teacher's seminars) and at teacher education departments in schools of

education within the universities. Major differences exist between these two types of training in terms of their organizational structure, their training model and the teaching programs themselves.

Subordinations

144. Although the universities are supervised by the Commission of Higher Education, they all have considerable leeway and autonomy since the law of higher education allows academic institutions to manage their academic and administrative affairs through their own internal organizations which are elected for set periods of time. The board of trustees, the executive board, and the university's president are in charge of administrative affairs, while the senate and rector are accountable for academic matters. Government control over the universities comes into play only in budgeting.

145. The managerial offices at the colleges of education include both administrative as well as academic organizations, all headed by the college principal. Yet, unlike the universities, their independence in running their own administrative and academic affairs is much limited. They are subordinate, on the one hand, to the Department of Teacher Education and In-service Training at the Ministry of Education with regard to budget, student quotas, teachers' working conditions, curricula etc., and, on the other hand, to the Commission of Higher Education in matters of academic standards and qualifications for receiving academic accreditation. This subordination of the colleges to the Ministry of Education has both historical as well as current administrative reasons. Since teacher education serves the general educational system, it operates under the states' educational acts and depends on decisions of policy makers, the pedagogical secretariat and other supervisory bodies within the Ministry of Education. The latter are the ones to determine the educational goals, the school curricula and the competence and knowledge required from the teacher to teach it. In other words, they are also the ones to indirectly determine the teacher training programs intended to achieve this competence and knowledge. In order to improve the preparation of teachers, school supervisors inform teacher training institutions about educational priorities, on the one hand, and on the success of their graduates, on the other. The direct supervision of the colleges, conducted by Department of Teacher Education and In-service Training at the Ministry, was meant to ensure that the Ministry's policy and plans are properly executed.

146. Administration wise, teacher training is a direct responsibility of the Department of Teacher Education and In-service Training at the Ministry of Education which is in charge of planning the size and geographical distribution of teachers colleges while also allocating college budgets based on student quotas, Ministry resources and policy regarding regulation of teaching force according to subject areas and regional demands. The certification processes are also under the control of this Teacher Education Department. With the process of academization and the growing degree of independence given to the teachers colleges, the Department of Teacher Education and In-service Training has changed from being "a controller" to being "a liaison" whose purpose is to accompany and aid the colleges with their plans. The academization process has created a series of quandaries as to the relations between the colleges and the educational system. For one thing, it has created a constant source of tension among the colleges which strive for full independence without being cut off from their financial support, and the Ministry which is keen, one way or another, to go on dictating, supervising and certifying college graduates.

Budgetary issues

147. Teacher training at the universities is budgeted by the Committee of Planning and Budgeting which is part of the Committee of Higher Education. In other words, it is budgeted directly by the government without the mediation of the Ministry of Education. This state of affairs has its advantages and disadvantages. Due to the low status of the education departments within the universities, compared with

other faculties, universities do not transfer the full allocated budget to departments of education, including their teacher education programs (Nevo, 1999).

148. Colleges of education are budgeted by the Ministry of Education from 20% to 60% of the total budget of the college; the rest originates from tuition fees. Budget is then utilized mostly for operational and managerial purposes (30%-40%) and for teaching-related fees (40%-70%) with 1%-10% being directed towards research (Ayalon & Yogev, 2002).

Admission requirements

149. Admission requirements at the universities include a psychometric test and a complete high-school-matriculation, with admission standards changing from faculty to faculty with the exception of the faculty of the humanities where no psychometric test is required at all. Admission requirements for the academic teacher training programs at the universities, however, do not include psychometric score but rather BA grades and an evaluation of a screening committee.

150. Admission requirements at the colleges of education include a complete high-school-matriculation with a minimum mean grade ranging from 65 to 70, and a passing score of at least 450 in the psychometric test or an equivalent of at least 80 in the so-called Saf exam (as noted earlier, the admission scores have increased lately to 85 or 485-490 respectively).

Staff-related academic characteristics

151. At the universities, the demand is for a teaching staff who hold doctoral degrees, but in most teacher training programs, non-faculty teachers, who are the ones primarily engaged in teaching in these programs, do not always meet this demand.

152. At the colleges, despite the immense efforts taken to boost the academic profile of the teaching staff in recent years, most staff still has only a graduate degree (54%-57%) and only a quarter has a doctoral degree (Ayalon & Yogev, 2002). The requirement for higher academic degrees from college staff was recently advanced by an agreement signed by the treasury, teacher unions and the Ministry of Education in regard to the promotion of teacher educators. Following this agreement, many teachers in teachers colleges are now enrolled in PhD programs. Even though the salary ranks in teachers colleges are not equivalent to academic ranks at the universities given by the Commission for Higher Education, lately, an attempt has been made to match these ranks with those of academic staff at the universities.

4.2.2 Teacher education at the universities: Structure, programs and number of teachers

153. Teacher training at the universities takes place in schools of education of six universities and follows the consecutive model, i.e., the teacher education program follows upon a graduate program and all applicants must have either completed their undergraduate degree or be in its final stages. An exception is the *Technion* where the teaching certificate studies are part of post-graduate science-education studies. At Haifa University there is also a special graduate program in teaching, in addition to the regular teaching certificate studies. The teaching certificate allows university graduates to teach at junior-high and high schools.

154. Studies towards the teaching certificate typically extend over two years although they can be completed in one year only with a load of 28-32 hours per week, excluding pre-requisite courses and field work. The program varies among the departments but always contains the following components: (i) introductory courses in education (e.g., sociology, psychology), (ii) pedagogical courses relevant to the

field of specialization, and (iii) a number of elective courses. All programs also include a practical component (internship), usually during the third year, accompanied by a practical preparatory workshop of two-weekly hours and additional support-group meetings held every couple of weeks throughout a whole year. Very often, the practical component is contracted to one semester only during which students visit schools twice a week for a period of five hours only. In the course of this semester students are required to administer ten classes and compose a test. Since 2003, an induction year has been added as a new requirement for obtaining the teaching license (Ministry of Education, 2001a, Circular 62/4(2)).

155. The number of university graduates of education, most of whom are women, has increased slowly over the years from 853 in 1953 to about 1,300 in 1999 and remained stable since then. These numbers are much lower than the number of college graduates (CBS, 2003a). Data are presented in Table 4.1.

4.2.3 Teacher education at the colleges: Structure, programs and number of teachers

156. In 2001/2 there were 52 non-university institutions, 27 of them academic colleges of which 16 are secular and 11 religious. Out of the secular academic colleges, two are Arab colleges. All other institutions are non academic, mostly two-year seminars which serves the ultra-orthodox public on all its streams. Teacher training in these colleges follow the concurrent model which combines disciplinary and pedagogical contents. There are three possible routes for the initial teacher training program:

a) Regular academic studies: a four year program, which grants a B.Ed. degree including a one-year induction program, which can be carried out as part of the fourth year or later in the first year of teaching. In the religious colleges, this program is the equivalent of a B.A.

b) Retraining programs for university graduates: a one- or two-year course with an additional induction year, intended for university graduates in various disciplines who wish to acquire a teaching certificate from a teachers college.

c) Regular non-academic studies: a two- or three- year program for "certified teachers" and "advanced-certified teachers" currently operating only in the ultra-orthodox colleges.

The teacher education programs in the academic routes follow the guidelines of the Commission of Higher Education (Dan Committee, 1981).

Regular academic studies

157. As noted above, this is a four-year program (110-115 hours annually) ending with a one-year induction program, which grants a B.Ed. degree. The induction year can be done either as part of the fourth year or in the first year of teaching. This program includes a number of teacher training streams such as kindergarten, early-childhood, primary school, upper primary school and special education. Each stream, then, includes a number of possible specializations, usually discipline-oriented. Studies include the following components: (i) basic courses (e.g., Hebrew language, English for academic purposes, first aid, etc.) which make up about 10% of the total number of hours; (ii) introductory courses in education which make up about 15% of the total number of hours; (iii) pedagogical courses relevant to the field of specialization including field experiences, which make up about 30% of the total number of hours, half of which time (about 18 hours) is devoted to actual teaching in schools; (iv) disciplinary courses in a specific specialization, making up about 45% of the total number of hours.

Retraining programs for university graduates

158. This program, as already noted above, is a one- or two-year course with an additional induction year, intended for university graduates in various disciplines who wish to acquire a teaching certificate from a college of education. This, too, is considered as a regular program and includes (i) basic, (ii) theoretical and (iii) practical and pedagogical courses as presented above. The fourth component, i.e., disciplinary courses in a specific area of specialization, is required only from students whose B.A. is in another area of specialization than that of their teaching certificate. The duration of the program varies between 30 and 54 weekly hours depending on the student's educational background. The number of weekly hours devoted to field work is currently 6, a third of what is required in the non-retraining, regular program, and is intended to increase to 10-12 hours in the future.

159. Table 4.2, which is based on several tables in the statistical abstracts, displays the change in the number of students attending colleges of education and in their demographic characteristics since the 1980s (CBS, 2002a, 1999d, 1994b, 1997b). It also reflects the change in the academization process of the teacher education institutions and the change in the number of Arab students studying to be teachers.

160. As can be seen, in the past two decades, the number of regular students tripled from 11,770 in 1980 up to 31,063 in 2001. This growth is due to an almost a 100% increase in the number of students at the secular teacher education colleges, a 150% increase in the number of students in the religious teacher education colleges, and a six-fold increase in the number of students in the ultra-orthodox teacher education colleges. In 2001, the number of ultra-orthodox students exceeded that of students studying in religious teacher education colleges, and the total number of students with religious affiliation (i.e., religious and ultra-orthodox) is almost equal that of secular student teachers. The large increase in the number of ultra-orthodox student teachers reflects, in part, a genuine growth since teachers colleges are regarded as one of the few possible routes for ultra-orthodox women towards post secondary education and acquiring a profession. In part though, this is a pseudo-growth which is due to a sudden true reporting of the number of students forced on the ultra-orthodox colleges by the Ministry of Education for money allocation purposes. This tendency of the ultra-orthodox stream to be part of the official system has strengthened with the establishment of a committee within the Ministry of Education to examine the academic programs of the ultra-orthodox colleges.

161. Also shown in Table 4.2 a huge increase in the number of students studying for their B.A (from about 10,000 in 1995 to about 25,000 in 2002) and in the number of academic colleges (from 13 in 1995 to 27 in 2002, two of them are Arab colleges). As of 1999, due to new policy regulations from the Ministry of Education, there are no more studies towards certified and advanced certified diplomas in the state secular and religious colleges. These types of diplomas are allowed only in the ultra-orthodox colleges.

162. Table 4.2 also indicates a huge growth in the number of Arab students in the last two decades, 6.3 times more than in 1980. This is also an enormous increase in comparison to an only 2.6 growth of the Jewish student population. Also evident is a drastic decline in the number of male Arab student teachers in comparison to the constant percentage of males in the Jewish student teacher population.

163. Table 4.3 presents the percentage of those who received B.Ed. out of those who graduated in the previous year. Data refer to two consecutive years – 2000 and 2001 (CBS, 2002a). The decrease in the percentage of B.Ed. recipients in 2001 is due to the increase in the number of ultra-orthodox graduates in the non-academic routes.

4.2.4 Differences between teacher education programs at universities and at colleges

164. While universities follow the consecutive model according to which teacher education and pedagogical studies follow the studies of the discipline, colleges of education follow the concurrent model in which both types of studies are integrated. An additional difference between these two types of institutions is the small amount of time devoted to field work at the academic teacher training programs as compared to the colleges.

165. Professional teacher training at the universities focuses more on conceptual aspects rather than technical ones, especially when compared with the professional training at the colleges where more attention is given, as already noted, to the practical side. There are advantages as well as disadvantages to both types of teacher training programs as pointed out by Nevo (1999). Among the strengths of the universities the following can be counted: (1) a high academic level in the discipline; (2) direct connection with educational research; (3) direct progress towards higher educational degrees; (4) prestigious status of the institution and (5) academic freedom and independence from the Ministry of Education, thus allowing independent development and improvement of teaching curricula. Among the weaknesses of the universities the following can be mentioned: (1) limited contact with schools; (2) low status of the departments of education within the university and low status of the teaching programs within the departments of education; (3) universities' negative image as being too theoretical at the expense of practical relevance and (4) a lack of obvious sponsorship.

166. Although it is customary to claim that these two types of institutions differ immensely, a study by Avdor (2001) points to numerous similarities between them. Results of the study, based on student perceptions, showed no differences in the way students perceive the nature of the curriculum and processes of teaching. In contrast with the research hypothesis, it was found that in both systems, the primary knowledge transmitted is technical and practical in nature, and the approach taken to convey it emphasizes reflective aspects in the process of gaining knowledge. It was also found that both institutions emphasize the delivery of information more than the development of analytic competency, a situation which is similar to that found in other types of professional training such as engineering and medicine.

4.3 Professional development of teachers – Continuing studies

167. In the early 1990s, the Ministry of Education, in cooperation with the teachers unions, launched a long-term project dedicated to "the academization of the Israeli teaching force" with the aim of encouraging all teachers who are able and willing to get an undergraduate diploma within one decade. Universities as well as teachers colleges with academic accreditation were able to absorb these teachers for their continuing studies towards an academic degree. Initially, the number of applicants was small and, therefore, no special budget was required. Yet, within a short period of time the number of applicants grew immensely due to several reasons, including universities' readiness to accept these undergraduates in their undergraduate programs; the option to upgrade teachers' diploma from "certified" to "advanced certified" whilst still enrolled in their undergraduate studies, and finally, due to massive publicity around the program.

168. The growing number of applicants, which demanded inevitable additional budgeting, led to disagreements between the Ministry of Finance, the Ministry of Education and the teachers unions. Yet, the academization process continued to thrive with various committees involved in discussing its curricula and budgeting possibilities (Moore, 1993). In 1999, a new cut-off date was declared, according to which the academization process would be completed within the next five years. Presented in Table 4.4 is the number of teachers continuing their studies for academic as well as non-academic degrees. It indicates a continuous growth of B.Ed. graduates in the continuing programs, from 4,419 in 1995 to 6,271 in 2000.

The number of those applying to continuing studies in the non-academic track has remained stable during these years. In the coming years, with the opening of the M.Ed. studies, it is expected that the numbers of teachers applying for further studies will increase.

4.4 Professional development of teachers – Induction programs

169. Over the years, there have been two stages in the development of induction programs for teachers in their first year of teaching. The first phase, which took place during 1990-1997, was called "accompanying beginning teachers". The second phase, in 1998, was called "specialization in teaching". In this section only the former will be presented; the latter is presented in Section 4.6.

170. In 1990, following the recommendation of the Etzioni committee, albeit ten years after its publication, the old idea of providing support for beginning teachers was mentioned once again in the director's circular (Ministry of Education, 1990, 51/11). The aims of this project were to provide support for newly appointed teachers in their first year of work, thereby to reduce their drop-out rate and to consolidate earlier training through the feedback gained during this year of work experience.

171. The project of accompanying new teachers was based on the following four principles: it was a voluntary project; no judgment or evaluation was given to the new teachers; constant feedback was given to the teachers colleges for improvement purposes, and various types of mentoring were used (Erlich, 1995). The most frequently used type of mentoring was the "teacher education institutional" model in which beginning teachers were mentored by supervisors from the teacher education institute itself (Amir & Tamir, 1995). The second most prevalent model was an integrated one in which supervisors of the teacher training institutes and teachers from schools cooperated (Peleg, 1995). In all models, the source of support included the college of education.

172. The main activities of the college supervisors, who perceived their roles as providing emotional support and professional first aid for the new beginning teachers (Peleg, 1997), were school visits, classroom observations, face to face conversations and phone conversations with the new teacher, group dynamic workshops and one-day seminars at the colleges.

173. Within four years, the project expanded and in 1994 it covered 11% of all graduates. In spite of its growth, an evaluation study of this project (Peleg, 1997) showed that its goals were only partially met: (1) support was given only to some teachers, not necessarily to those who needed it the most, (2) college supervision seemed to have no effect on teachers' decision whether to continue teaching or not, although the integrated model, in which the college and the school cooperated, was more influential in that sense, and (3) feedback given by the supervisor aimed more towards emphasizing theoretical than practical knowledge. Thus, based on these results, the integrative model was found to be more beneficial and it was therefore included in the second type of program implemented starting from 1998 (Friedman & Gavish, 2001).

4.5 Professional development of teachers –In-service training

4.5.1 The continuum of teachers' professional development

174. There is general consent that the teaching profession requires a life-long learning and that the requisite knowledge for successful teaching can not be wholly transmitted to student teachers during their pre-service training. Thus, already in the 1970s, teachers' professional development was viewed as a two-phase continuum, including pre-service and in-service training. College supervisors saw it as their task to

provide emotional support and professional first aid to the beginning teachers. This perception has implications for both the contents and the organization of professional development programs.

175. With regard to the contents of the professional development programs a number of options exist. The first postulates that the purpose of in-service training is to deepen the contents already dealt with during the pre-service training so that the programs should be more theoretically oriented. The second option posits that in-service training courses should respond to the new roles and demands teachers face when starting their work, requiring therefore, a more practical and task-oriented approach. There is also an in-between option that advocates dealing with both aspects: the basic theoretical preparation – one-third, and practical task-preparation – two-thirds of a program (Tokatli, 1996). In relation to these two options – the organizational bodies responsible for the in-service training are located in two places – some at the universities and teachers colleges, and most in special in-service teachers centers created for this purpose. Recent surveys point to the insignificant role of the in-service programs within teacher education institutions, both at colleges and universities, and explains it by the preference of the Ministry of Education to support so-called teachers centers, which are directly controlled by it and which function as an immediate response to the priorities and demands of the educational system (Avdor & Movshovitz, 2001).

176. Organizationally speaking, viewing pre and in-service teacher education as located on one continuum led to the merging of all units dealing with student teachers and teachers into one administrative unit. During the 1990s, this option was neglected and this all-round-unit was again split up into two departments dealing separately with pre-service, in-service and supervision of the teaching force. Even though in-service and pre-service training in teacher education are presently perceived to be on the same continuum, they are still dealt by separate bodies not necessarily coordinated. In addition, there are many other organizational bodies dealing with in-service training for specific aims. In 2001, Ben-Peretz Committee, which investigated teachers' professional development, pointed to the lack of a unified policy in regard to the professional development of teachers and to unnecessary redundancies, and recommended a reform in this area. As a result, in 2002 there was an attempt to merge all these bodies dealing with in-service teacher education under one organizational umbrella called "professional development of educational teams", also known as PISGA (for more details on PISGA, see 4.5.2)

177. The abundance of organizational bodies providing in-service courses reflects their role within the educational system of implementing policy decisions and introducing changes into the field. However, in-service training has additional aims as it also serves schools and is used as a tool for their own restructuring. Indeed, Yonai (1999b) describes four types of in-service frameworks: (i) group in-service training intended to facilitate policy implementation and thus planned and organized by the Ministry of Education; (ii) task-oriented in-service training, also initiated by the Ministry of Education, usually aimed towards preparation of staff for certain functions (e.g., principals, coordinators, leaders); (iii) school-based in-service training, aimed at responding to school needs and thus organized by the schools themselves, and (iv) personal in-service training which is chosen by the individual participant and aims to provide professional enrichment and further education. These four types of in-service training courses exist simultaneously but their relative weight has changed over the years. In the 1950s-1970s, most in-service training was group oriented, serving different reforms in education. Since the establishment of sabbatical funds in 1963 and the policy of rewarding teachers for participation in in-service courses, the demand for the personal route of professional development increased since. The school-based in-service courses accelerated during the 1990s with the new move towards school autonomy.

178. All in-service training courses currently on offer give teachers credits that translate into salary increases. One credit unit equals about 112 hours of studies and the maximum credit a teacher can gain is 24.75.

4.5.2 Organizations responsible for in-service training

Group oriented in-service training

179. Group in-service training is conducted by a number of organizational bodies which are all subcontractors of the Ministry of Education. These include the pedagogical centers, which operate as information and resource centers and are located in different parts of the country, as well as the regional and district centers and departments of in-service training usually located in higher educational institutes. During the 1990s, following the recommendations of a committee aimed at promoting scientific and technological education (Harari Committee, 1992) a regional support system for teachers involved in this plan was established. Thus, in addition to the above in-service centers, ten more centers were set up serving about 5000 kindergarten teachers, teachers and school principals in each of the five-year plan (Tomorrow 1998, Five-year Plan). In 1995, 45,500 hours were allocated to this in-service training project, equaling the total number of hours allocated to all other in-service training run that year by the Ministry of Education (Ministry of Education, Budget Proposal, 1995)

180. This abundance of organizational bodies dealing with in-service training as well as the unbalanced allocation of funding led to the creation of an organizational unit called "professional development of educational teams", or PISGA, which runs and organizes all in-service training. The aim is to provide teacher training and satisfy the developmental needs of schools, districts, and the priorities of the Ministry of Education (Ministry of Education, 2002b, Circular, 62/10). In other words, these centers are in the service of the Ministry of Education, facilitating the implementation of the Ministry's policy at the district level with 60% of the budget aimed towards district priorities and 40% aimed towards priorities set by the Ministry. In should be noted that with the establishment of PISGA, the Ministry of Education took one more step in the direction of decentralization and privatization since most of the courses provided by PISGA are outsourced. PISGA also acts as a certifying unit which monitors and permits all in-service courses.

181. In 2003, 37 PISGA centers were operating all over the country in addition to 20 pedagogical centers country-wide. The professional development provided in all these centers is academically oriented, conducted in a workshop format with the aim of later implementation and coaching within the schools. Each center operates also as an educational resource center. The aims of these developmental centers are:

1) Promoting the educational achievements, emotional and social skills of students in the district.

2) Serving as an operational tool of the regional educational steering committee.

3) Mapping, in accordance with the supervisory body, the necessities and priorities of the region and responding to these needs.

4) Ensuring the implementation in the field of the in-service courses.

(Ministry of Education, 2002b, Circular, 62/10)

182. The number of teachers participating in these group oriented in-service training reflects intensive professional activity sponsored by the Ministry of Education. Table 4.5 presents these data. As can be seen from Table 4.5, in each of the last three years, about 100,000 teachers participated in about 3500 courses (Ministry of Education, Department of Teacher Development and In-service Training, 2002c; Budget Proposal, 2003b). While one credit unit equals about 112 hours of studies, the average number of hours per person is 140-150 hours, i.e., granting teachers more than one credit per year (out of 24.75 possible).

Task- oriented in-service training

183. Task-oriented in-service training is usually aimed towards the professional development of official personnel such as principals, field officers and other headquarters staff, prior to entering their new positions and while still working in their previous jobs. These courses are offered in several certified higher educational institutions and are monitored by the Center for Developing High Educational Officials within the Ministry of Education. These in-service courses are also initiated by the Ministry in line with its ideologies and priories.

School-based in-service training

184. School-based in-service courses are planned by the schools themselves. This type of training can be traced back to the activities of the school-based "pedagogical councils" that operated during the 1950s (Yonai, 1999a). Following the Etzioni Committee and the new move towards school autonomy and restructuring during the 1990s, there was an accelerated progress in this direction.

185. According to the collective salary agreements signed in 1993 by the Ministry of Finance, the Ministry of Education and the teachers unions, all teachers were to receive additional payment in return for two extra hours per week devoted to in-service training. School-based training became obligatory in all educational institutions with school principals deciding on its content and being responsible for its implementation. Since the school restructuring approach was not yet accepted in Israel at that time, implementing this in-service training confronted opposition and resistance with teachers unions referring to research data that showed low levels of satisfaction among teachers (Shleyer, Freund, & Schild, 1994), and urging teachers to resist and refuse cooperation. The Ministry of Finance, keen to save costs, did not mind the abolishment of the training and joined the resistance. A few months later, due to pressure from the teachers, there was a modification in the salary agreements according to which teachers waived their right for the extra salary and, in return, the in-service training became optional.

186. The Ministry of Education also bent its rules allowing schools to conduct in-service courses as long as 50% of their teachers were interested in them. The Ministry permitted schools to offer up to three in-service courses per year, each dealing with a different topic and extending between 56-112 hours each. This move towards voluntary-based courses did not, in fact, down-size school-based in-service training. It turned out that without coercion, most schools, of their own accord, chose to implement this in-service training option. A survey conducted by the Evaluation Department at the Ministry of Education showed that in 1995, 80% of the schools joined the school-based in-service training project (Shleyer & Schild, 1995). It was also found that the move towards school-based in-service training on a voluntary basis did in fact lead to an improvement in the execution of the program and increased teachers' cooperation and satisfaction (Gunt, Shleyer, Assouline, & Schild, 1997). Another study conducted during the transition between compulsory and voluntary school-based in-service programs showed that school-based training has become, in fact, an energizing element that has engaged the system in an ongoing process of learning, something that has been referred to as a "quiet revolution" (Yogev, 1997; Yosifon, 1997).

187. In 1996, school-based in-service training was implemented in 90% of the primary schools and in 80% of the upper-primary schools with a general participation ratio of 70%-75%. In 1997, as a result of political changes within the Ministry of Education and of cut-backs in government expenditures, it was decided to cancel the school-based in-service training and merge it with another project initiated by the Ministry (Tomorrow 98). Yet, due to public criticism and pressure from schools it was decided to continue implementing this training though on a more limited scale.

Personal in-service training

188. Personal in-service training aims to offer professional development and further education and is selected by the teachers themselves who choose the topics they wish to study. These may include various fields such as their own subject of teaching, general educational topics or any other enrichment courses given in various institutions such as universities and colleges. Such training does not require prior approval of any organizational body including the Ministry of Education.

189. Many teachers choose to plan their in-service professional development to take place during a one-year sabbatical leave which can be taken every six years and is funded partly by the teacher (4.2% of the salary) and partly by the employee (double that amount). During this sabbatical year, teachers receive a monthly grant which makes up two- thirds of their salaries in addition to a tuition waiver. Starting from 1993, non-certified teachers have been allowed into this program as well. From age 53 and above, conditions become even better: only 2.5% is deducted from the employee's salary with the employer contributing 7.5%. In addition, time intervals are shortened to three years but the saving can not be used for a sabbatical year.

4.5.3 Teacher guidance

190. In addition to in-service training, teachers are also given supervision by mentors who work in their schools. Teacher guidance was originally the responsibility of the Ministry's general and disciplinary inspectors but due to their workload, it was decided to nominate special supervisors for this job. In secondary education this task is performed mainly by discipline coordinators who work under the supervision of the chief inspector.

191. In the 1970s a "guidance bureau" was established on the recommendation of several internal committees of the Ministry of Education (Yafe Committee, 1974; Avigad Committee, 1975). This bureau, which is part of the pedagogical secretariat at the Ministry of Education, deals with all the activities of mentors and supervisors at the district level; it monitors their work, allocates budgets and provides training preparation.

4.6 Certification and licensure

4.6.1 Main requirements for a teaching certificate and changes in the process of certification

192. The academization of the educational institutions in Israel, accompanied by the academization of already practicing teachers, affected the licensure process and its requirements. The direction of change was toward a gradual increase in the licensure requirements and a separation between the certification and licensure processes. In previous years, the minimal requirement for receiving a teaching certificate was successful completion of a two-year teacher education program. This was then substituted by a three-year program required for advanced certification. With the beginning of academization in the 1990s, the requirement became completion of a four-year program granting a B.Ed. degree.

193. In previous years, licensure was only a technicality following certification. The only group of teachers to whom a license was not automatically granted was the upper primary group, trained at the universities. For them, both academic degrees and appropriate preparation were needed. The higher the grade taught, the higher was the academic degree required of teachers (e.g., teachers teaching in lower-secondary schools were required to have at least an advanced certification and a B.Ed.; in the upper-secondary schools teachers were required to have a second degree on top of their teaching certificate) (Ministry of Education, 1997, Special Circular 5).

194. The separation of licensure from certification processes was imported from other countries where licensure processes were tied up with the professionalization of teaching, similar to what was being done in other classic professions. However, in contrast to other professions, in teaching, the licensure requirements are decided from outside the professional bodies, by the employer, a sign of the semi-professional status of the teaching profession.

195. The Ministry's interest in controlling licensure processes stems, among other things, from the fact that teachers in the secondary schools in many cases are hired directly by principal, often without having a teaching certificate. Controlling the licensure processes aims to block this by-pass track and also offers a way to raise the level of qualifications needed for teaching in certain specializations. The above creates a clear distinction between the years of pre-service preparation, culminating in a teaching certificate, and the induction year which grants a license upon its completion.

196. Since 2000, a new license for all levels of education has been required both from university graduates and teachers college graduates. The prerequisite for obtaining this license is having a teaching certificate, having an academic degree and successful completion of the induction year. Since 2003, the induction year was also declared compulsory for students studying to be teachers at the university and thus the requirements for licensure were unified at all teacher education institutions.

4.6.2 Induction year

197. The introduction of the induction year stems from the perception of teaching as an academic profession, in which the induction period is an inseparable part from the professional preparation (Ma'apil et al., 1999; Ministry of Education, 1999 Circular, 62/4). This year of preparation was defined as the first year of teachers' work in the profession. Teachers are required to work, under the supervision of a mentor a third of a full teaching position, for at least a six months period. During this period teachers are regarded as advanced certified teachers and they gain credit for one year of teaching experience. The induction year provides an opportunity to experience teaching in real conditions as it exposes the new teacher to authentic teaching-learning situations, enables a deep acquaintance with the school system, team-work and decision making in real time. It also allows gradual entrance to teaching in an appropriate socialization process which prevents washing away things that were gained during the pre-service training. The induction year also forges a link between theoretical knowledge gained at the college and practical knowledge gained in the school and boosts the self image of the new teacher. It also has some advantage to the schools themselves since it enables them to evaluate the adequacy of new teachers to the school. This is a shift of responsibilities of preparing teachers from the colleges to the schools and it is in line with the movement towards granting autonomy to schools. It also leads to the creation of a culture that absorbs new teachers, which coincides with the restructuring of the schools. During the induction year, the new teachers are constantly evaluated. At the end of this year, teachers are administratively fired and re-hired for a second probation year in which a second process of evaluation occurs, this time by the inspectorate. If no negative opinions are raised, teacher candidates are permanently employed in their third year.

198. The induction program was evaluated using a large-scale experimental research design over a period of four years 1996-1999. Results, during the second year of the evaluation program, revealed low levels of satisfaction among the new teachers and pointed to several weaknesses related to administrative problems (Schild and Carmeli 1997). The latter included difficulties in finding mentors and mentoring sites, inadequately prepared mentors, and a weak linkage between the schools and the teachers colleges. These weaknesses were taken into consideration in subsequent years. For example, in order to overcome the shortage of places for mentoring, it was decided that the induction year would be the first year of applicant's teaching, depending on availability of teaching positions. Courses for mentors were offered (a forecast predicts that 5000 mentors will be operating by 2004).

199. In another evaluation study (Reichenberg, Lazovsky, & Zeiger, 2000, 2002), the picture emerging at the end of the induction program was a mixed one according to which some beginning teachers were satisfied while other perceived the induction year as an extra burden, a low-status period and unnecessary. Again, there were problems in assigning candidates to appropriate workplaces, the professional contribution of the mentors was down-played - they were regarded mostly as emotional supporters, and the attitudes towards the college-based workshop during the induction year were unenthusiastic. Still, there was evidence that the induction program influenced new teachers' intention to continue teaching and not to drop out. It should be noted that the induction year is a very expensive program (1.8 million NIS annually in current prices; if fully implemented, the cost will exceed 18 million NIS per year) and it is still too early to evaluate the program's cost-effectiveness.

5. RECRUITING, SELECTING AND APPOINTING TEACHERS

200. This chapter deals with issues related to managing the teaching force both at the state level and at the local district level. The first section deals with major problems in the recruitment, selection and appointment of teachers to schools; the second describes the processes of defining vacancies, appointments and placement of teachers; the third deals with processes related to the selection of teachers, and the last section deals with problems related to the employment of unqualified teachers.

5.1 Difficulties related to recruitment, selection and appointment of teachers to schools

Lack of effective forecasting models

201. The lack of historical data on turnover rate in the teaching force, the lack of differential data on demand and supply of teachers in different subject matters and in different regional districts, and the constant uncertainty with regard to demand and supply of teachers until the very beginning of the next school year, make it almost impossible to predict and plan the teacher supply, not even at the micro level of schools and districts.

Lack of screening mechanisms

202. The different types of employment contracts and a frequent existence of collective salary contracts with a relative short tenure-track period (five years at the maximum) require careful selection processes with high predictive validity prior to making any hiring decision, since teachers who pass this screening mechanism may stay within the system for 35-40 years. Yet, such mechanisms do not exist.

The problem of unqualified teachers in schools

203. Despite numerous initiatives and regulations aimed at preventing the entrance of unqualified teachers to teaching, still many of them, either with no certification or with out-of-field certification, teach in schools, especially in upper-secondary level. This tendency is even more notable in face of privatization trends where no control mechanisms prevent this phenomenon from occurring.

5.2 Turnover of the teaching force

204. Teachers' turnover is a result of teachers leaving the educational system and teachers moving from one school to another. Thus, the term turnover is used to describe teachers leaving their positions in three situations: moving from one school to another, temporary leave for sabbatical or unpaid leave and permanent leave due to retirement or change of profession. Table 5.1, presents the annual turnover rate, i.e., the percentage of teachers corresponding to each of the three categories above, out of the total number of teachers teaching that year in primary and secondary education (CBS, 2003a). As noted in the table, a stable annual turnover rate of 20%-25% of the total number of teachers exists in all levels of education (in 1991, the turnover rate included 10,000 primary school teachers and about 7,500 secondary teachers; in 1998 the numbers reached about 15,000 and 10,500 teachers respectively). In primary schools, the highest percentage (about 40% of those teachers leaving their positions) consists of teachers moving from one

school to another while in secondary schools, the highest percentage are those who permanently leave the system.

5.3 Determining vacant positions: forecasting demands, appointing and placing teachers in schools

5.3.1 Forecasting the demand for teachers

205. Regulation of the teaching force is dependent on effective models of forecasting teacher demand. In Israel, two attempts to develop a forecasting model were made, both initiated by the Ministry of Education. The first, published in 1996, tried to forecast teacher demand for the year 2005 in light of the introduction of ICT (Information and Communication Technology) into schools (Sokolov et al., 1996). Predictions were based on three scenarios: a conservative one "business as usual"; a "Delphi" scenario based on data provided by the Ministry of Education's planning bureau; and an "information-society" scenario based on expert opinions. According to all forecasts, and especially according to the information-society scenario, an extra demand for teachers of at least 50%-60% was predicted for the year 2005, especially in the fields of science and technology and at the primary level. Conclusions obtained from these three models were never implemented.

206. Another forecast, intended for the year 2006 and still under development by the Central Bureau of Statistics, uses a "Monte-Carlo simulation" technique under conditions of "business as usual" (Wexler & Maagan, 2002). Research accompanying the development of this forecast takes into consideration the high turnover rate of teachers in schools. This forecast seems to be an appropriate tool for predicting the supply and demand of teachers, which would help the Ministry of Education's future estimations. According to the latest findings of this forecast the demand for teachers toward the year 2007 in the Hebrew sector will increase especially in the upper secondary school. In the primary level, however, the demand will decline (Maagan, Wexler, Provas, & Shapira, 2003).

5.3.2 Recruitment processes

207. Forecasting and planning teachers' supply in the short range, i.e., from one year to the other, is usually done either at the district or the school level. Interviews conducted with a number of heads at the Department of Teaching Force Administration as well as with a number of directors and administrators at the district level, point to some difficulties in this respect. This is so because, at this level, the degree of uncertainty is very high due to constant changes occurring in the system such as class mergers, closure of institutions and unexpected teachers' leaves which make it very hard to plan the number of needed teachers in advance.

208. Recruitment processes are conducted in different ways, in official education determined by the Ministry of Education as opposed to non-official education which is more autonomous. In the official educational system, most of the recruitment of teachers is done at the district level via the inspectors and is in line with criteria determined by the Ministry of Education. Nonetheless, there are cases in which recruitment requirements are violated due to existing conditions at the district level. For example, although unqualified teachers are not allowed to teach classes, in case of shortage, the district can hire such teachers on a temporary basis.

209. From May onwards, the inspectorate collects data from schools and from the Ministry of Education concerning anticipated changes (e.g., opening of schools in new neighborhoods, demand for teachers in special education as a response to a new law concerning the mainstreaming of disabled children, demand for teachers in specific subject-matters). This information is then used for matching between schools and candidate teachers who are invited by the school for an interview. Teachers can apply

for a position, either by contacting a specific supervisory board or by sending an application form to the Ministry in which they provide information regarding their qualifications as well as their preferences regarding working conditions (e.g., preferred district and grades). These lists are then transferred to the districts where the inspectorate plays a major role in matching schools' needs with candidates' preferences. Percentage of teachers applying through these official lists ranged from 36% to 52% in the years 1995-2001.

210. As noted above, a different recruitment mechanism exists in non-official education, which is more autonomous. In this case, an open recruitment process is used in which teachers apply directly to schools with no mediation of the Ministry or of the supervisor at the district level. Matching these teachers with available teaching posts happen at the school level. The inspectorate and a representative from the Ministry are involved in this process only at a later stage. Recruitment processes may often deviate from Ministry regulations regarding hiring criteria.

5.4 Selection processes

211. Teachers can be employed either on the basis of a special fixed-term contract or by filling a vacant teaching position. Fixed-term employment contracts are used for new teachers in their induction year, who are hired for special projects or as substitute teachers. In both cases, teachers are hired on the basis of a temporary contract. If they meet the criteria, pedagogically as well as administratively, they move into a tenure track or sign a contract of indefinite duration. Teachers can hold temporary status for up to four years and must then be either permanently hired or dismissed on pedagogical or administrative grounds. The probation period extends between two years for qualified teachers to four years for unqualified teachers. This period can be extended upon agreement with the teachers union.

212. Tenure track position is gained subsequent to an evaluation process involving the school inspector who is allowed by decree to observe teachers in their classes. Inspectors need to report such observation to the district director with a copy submitted to the teacher. Yet, this evaluation by the inspectorate is not conducted systematically due to work overload.

5.5 Employment of unqualified teachers

213. All qualified teachers must hold a teaching certificate obtained from an Israeli university or college or from an approved non-Israeli institution; alternatively they may hold an advanced certification diploma granted to them on the basis of participation in various in-service training courses. Another, fairly recent requirement is holding a permanent license for working in teaching. The many recognized diplomas in circulation and the many approved bodies who grant them, reflect a tendency to facilitate certification processes. In the case of secondary schools, the teaching certificate as well as the academic degree should be compatible with the subject matter taught by the teacher. Yet, there are still many teachers who hold a certificate that is not in line with their field of teaching, especially at the upper-secondary level.

214. Interviews with people at the Ministry of Education indicate that in spite of the recently increased demand for certification this is not consistently applied tending to change from one level of education to another. The demand for certification consists of two types: the official one, which is more severe, and the actual one practiced in the field, which is less severe and exacting. For example, on the primary level, the official demand is for advanced certification or a B.Ed., but regular certification is still acknowledged especially in the ultra-orthodox stream; in the upper-secondary school the official requirement is for a second degree in the field of teaching as well as for a teaching certificate while the less stringent one agrees on a first degree in the teacher's area of teaching and a teaching certificate.

215. As displayed in Table 5.2, during 1991-2001, there has been an increase in the percentage of qualified teachers at the primary level (from 84% to 92%) as well as at the lower-secondary level (30% to 75%) and at the upper-secondary level (34% to 67% according to more lenient criteria, i.e., graduate degree only; 8% to 24% according to more stringent criteria, i.e., graduate degree and a teaching certificate) (CBS, 2003a).

216. The percentage of teachers with appropriate qualifications in the subject they teach varies among subjects. As presented in Table 5.3, the lowest percentage occurs among ICT teachers (ranging between 7%-12%) and vocational teachers (3% to 15%) while the highest is in foreign languages (57% -73%) and in sciences (53%-62%). During 1991-2002, a considerable growth in the percentage of appropriately qualified math teachers occurred (38%-60%) (CBS, 2003a).

217. Lately, a new licensure process requires, in addition to an academic degree and pedagogical training, successful completion of an induction year. The effect of these new regulations has not yet been assessed.

6. RETAINING EFFECTIVE TEACHERS IN SCHOOLS

218. This chapter deals with retaining teachers in the system and preventing their dropout. However, the teachers in question are not necessarily effective teachers since there is a lack of consensus regarding the definition of an effective teacher and hence, no mechanisms exist for measuring and identifying effective teachers and screening less effective ones. We, nevertheless, refer loosely to this term when dealing with the following question: is there a dropout phenomenon in the teaching profession? What measures are taken in order to prevent teachers' dropout and to what extent are they efficient? What actions are taken in order to cope with ineffective teachers?

6.1 Main difficulties related to retaining effective teachers in schools

219. The main problems related to retaining effective teachers in schools are:

- Difficulties in ensuring appropriate incentives for effective teachers.
- A career structure that does not provide opportunities for significant advancement.
- Teachers' burnout due to heavy teaching loads and excessive working time, large class size and problems of discipline and violence within schools.
- A lack of teacher evaluation systems and difficulties in teachers' dismissal procedures.

6.2 The problem of teachers' dropout

6.2.1 Teachers leaving the profession

220. As noted in Chapter 5 (Section 5.2), the annual general turnover rate within the educational system is consistent and stands at 25% of the teaching force in all levels of education. In 1998, the percentage of teachers permanently leaving the educational system, i.e., retiring teachers, reached 10% out of the total teaching force that year. This percentage was higher for men than for women (12% vs. 9.4% respectively). Data from the last decade show that the percentage of teachers going into retirement has remained constant in upper primary education but increased on the primary school level where it was 6.7% in 1991 compared to 11% in 1998 (CBS, 2003a: Table 7). Data also show that 25% of the teachers who leave teaching for good do so during the first five years of their work (usually in their late 20s), 50% leave teaching between age 30-40, and the remaining 25% do so at later ages.

221. As can be seen in Table 6.1 (Ministry of Education, 2001b), a small percentage of teachers, ranging from 3% to 6%, leave the profession at the age of 65, which is the highest official age and the compulsory age of retirement. An additional 13% to 16% leave the profession at the usual age of retirement (60 for women and 65 for men). Yet, most of the teachers – 56% to 70% – leave the profession before the age of 60, i.e., prior even to the lowest official age of retirement for women. These latter figures mean that 10% of the total teaching force retires before the official age of retirement; this is a fairly low rate. The rest of the teachers, ranging from 13% to 27%, leave the profession at various points in time for health or mortality reasons.

222. The fact that over 50% of the retiring teachers leave the profession before the official age of retirement may reflect stress and burnout. Moreover, the data showing that 50% of the teachers retire at ages 30-40 may indicate that retirement is also related to economic dissatisfaction while other career options still being available at these ages. Studies show high levels of stress and burnout among teachers in Israel (Shirom, 1994). It was also found that experiencing occupational pressure was correlated with a number of factors, primarily the relationship with pupils, but also the relationship with parents, school principals and other colleagues. These pressures were found to exist both among new teachers as well as among more experienced ones (Gavish & Friedman, 2000).

223. Additional factors that were found to influence the feelings of burnout and stress among teachers are years of work - with longer serving teachers reporting more burnout - and level of education, with teachers teaching in lower levels of education reporting on more occupational pressure than teachers teaching in higher grades (Kfir & Shany, 1993). Low levels of burnout were also found among teachers holding additional roles in school other than teaching (Inbal & Rosenblatt, 1998).

6.2.2 Teachers' absences

224. Another indicator of teachers' burnout is their absences. In Israel, as in other countries, absences in the public sector are more frequent than absences in the private sector. Absences among teachers are even more prominent than among others working in the public service. For example, the percentage of temporary teacher absentees out of the total abscesses within the workforce is 31% compared with 13% in industry, 12% in the business sector and 8% in commerce (CBS, 2002a: Table 12.21). Despite this high level of absenteeism, there are currently no sanctions for unjustified absences.

225. In recent years, two large-scale studies related to teachers' absences were carried out in Israel (Globerson & Rivin-Abeles, 1995; Rivin-Abeles, 2000). Findings show that the annual rate of teachers with at least one monthly absence is among the highest on the Israeli market and ranges between 29% to 42% of the sampled teachers. The average length of the total monthly number of absences per teacher is 15-17 hours, which equals, on average, four days per month for the absent teachers and about 1.5 days per month for every working teacher. This high rate makes up about 6%-9% of the total number of hours per month which results in a loss of about 600,000 days per year (or two million working hours) due to teachers' absences (Globerson & Ben-Yishai, 2001, p. 236; Globerson & Rivin-Abeles, 1995). Most of the absences are short-term ones of one or two days, with a preference for the last working day of the week, prior to the weekend. The common reason for an absence is a medical one accompanied by a doctor's note, followed by family problems, maternity leave and health problems without a doctor's note (Globerson & Ben-Yishai, 2001). The percentage of absences always goes up during the winter.

226. Among the demographic and institutional factors related to teachers' absences are heavy teaching loads, being a homeroom teacher and working in large schools. In addition, more absences were reported for males, for teachers working in state-religious schools and in the Arab sector. In all these cases, the number of working hours is usually higher than for other subsections of the teacher population.

227. Among the personal factors affecting teachers' absences the following are noted: teacher's years of experience, age, number of children and the distance between his or her residence and school. In other words, absences are less common among older teachers, more experienced ones and those who live closer to their schools.

228. The third factor related to rate of absences has to do with teachers' motivation, work ethics and commitment to the profession and it includes salary and a teacher's roles in the school. With regard to the

latter factor, it was found that teachers who take more roles within their schools in addition to teaching tend to be less absent than teachers with fewer roles.

6.3 Coping with teachers' leave

229. Following are teachers' working conditions, some of which are directly related to coping with teachers' leave. These include leave of absence and sabbaticals, teachers' career structure and promotion, monetary incentives, other incentives and individual contracts, options for additional earning, teaching workloads, class size, availability of support staff, and discipline and safety problems.

6.3.1 Leave of absence and sabbaticals

230. One of the most tempting aspects of the teaching profession is the terms of leave which are among the most generous in the Israeli job market. Within the Israeli educational system, the number of official paid days of leave, including holidays, reaches 40 days per year, not including the two months of summer vacation. This means that the total annual working days amount to about 220 a year. Teachers are also allowed to take paid leaves for health reasons, which are part of their public service social rights "basket" including maternity leave, teacher's family health problems, etc. Teachers are also allowed leaves for studies, when participating in official delegations and attending conferences to which they have been officially invited to lecture. Another very popular leave is the sabbatical leave paid through a sabbatical fund which can be taken up after six years of work. During this year, teachers receive a monthly grant which equals two thirds of their salary and a tuition waiver. Finally, teachers are allowed an unpaid leave of up to three years. There is a possibility of extending this unpaid leave upon special request.

231. Table 6.2 presents the frequency of teachers' leave in the years 1992-1996. The main reason for teachers' long-term leave is the sabbatical year (40%-50% of the teachers on leave). Additional reasons for teachers' leaves are maternity leave (3%-8%), health (3%), study (7%-8%), national service (8%), family reasons (8%) and additional reasons (20%-30%). This distribution is consistent over the years (Ministry of Education, 2001b).

232. These many opportunities for official leave in the teaching occupation are regarded as essential when considering the workload and pressure of this type of work. There is no doubt that given the current working conditions and salaries, a reduction in the number of paid leaves would prevent many women, who are the majority of the teachers' workforce, from joining the teaching profession.

233. In a study investigating the commitment of teachers to the teaching profession it was found that one of the factors affecting teachers' commitment to the profession and their willingness to remain in it were the working conditions, and among them the availability of numerous paid leaves (Schrift, Nasser & Hayshrik-Amusi, 2000).

6.3.2 Teachers' career structure and promotion

234. At present, teachers' career structure lacks any career ladder and except for very few management roles such as those of school principals and supervisors, the educational system lacks promotion ranks. The only place in which promotion ranks were recently implemented is at the academic teachers colleges. Based on a contract signed by the Minister of Treasury, Ministry of Education and teachers unions, four promotion ranks can be granted to teacher educators according to several agreed-upon criteria, such as excellence in teaching, educational entrepreneurship, curriculum development and research publications.

235. Apart from teacher educators, teachers in all other levels of education, including pre-primary and post primary education, lack any promotion prospects. These teachers are appointed mainly in teaching positions where they act as regular disciplinary teachers or homeroom teachers (84-93% of the total teachers in schools with more homeroom teachers in primary education than in post primary education; CBS, 2002d). Only a small percent of the teachers (7%-16%) hold other formally defined roles such as consultants or principals. This picture has been consistent throughout the 1990s and is similar in all regional districts, in secular as well as in state-religious schools, and both in Jewish and Arab education (Ministry of Education, 2001b).

236. Even when roles do exist within schools, such as subject matter coordinator, theme coordinator, grade level coordinator and consultant, they are rather than hierarchically related, widthwise type of positions. Yet, these roles are usually informal and are, thus, not rewarded appropriately. Hence, when teachers transfer to another school or leave the profession, these additional roles carried out in the past do not count to their credit. Recent studies show that one of the prominent changes occurring lately in schools, is the expansion of these types of roles (Resh et al., 1989) as almost 50% of school teachers hold such additional roles to their teaching roles in school (Ram, 1993).

237. In a study conducted on teachers' attitudes towards their profession it was found that those who were rewarded for additional roles in teaching felt more satisfied with their work than teachers who did not have any other roles (Addi & Chen, 1997). Similar findings were reported by another research study which showed that teachers who have more roles in their schools exhibit lower levels of burnout and a lower tendency to leave the teaching profession (Inbal & Rosenblatt, 1998).

238. In spite of several recommendations for career ladders in the teaching profession as well as for the restructuring and redefining of teachers' roles (e.g., the Etzioni Committee), these suggestions were not realized beyond implementing modest monetary rewards (Israeli, 1999). Lately, an internal committee within the Ministry of Education suggested the introduction of several official widthwise types of incentives into schools. It was also suggested that these incentives be dependent mostly upon participation in on-the-job education courses and excellence in work, with years of experience being only a secondary factor (personal communication with people at the Ministry of Education, January, 2003).

239. Another recently recommended reform in teachers' career structure was presented by the Association of Secondary School Teachers. The creation of a four-track career was recommended, each targeted at a different population of education professionals: teachers and educators, principals, inspectors and supervisors, and finally, administrative personnel (The Association of Secondary School Teachers, 2000).

240. Yet, it should be noted that even though career advancement is limited in the teaching profession, one of its main attractions is the possibility to achieve tenure in the relatively short time-span of three years.

6.3.3 Monetary incentives

241. In an attempt to make the teaching profession more attractive, monetary incentives were introduced, compensating for the almost non-existent career ladder and low salaries. These incentives are awarded to teachers in compensation for unacknowledged roles within schools and for participating in in-service training and other professional development activities.

242. Incentives awarded to teachers in compensation for unacknowledged roles in schools include offers of roles such as subject coordinator or theme coordinator, as well as special tasks such as

supervising testing sessions, preparing classes for matriculation, accompanying field trips and other out-of-school activities. Apart from monetary incentives given to school principals, all other such incentives are very low, ranging from 2% to 10% of the basic salary. A school reform suggested by the Association of Secondary School Teachers recommended that more significant credits be granted to teachers performing these roles, with the possibility that these credits be counted when teachers move from one school to another and as part of their pension rights.

243. The second type of incentive is a much more significant one which can reach up to 30% of the basic salary and is awarded, as noted above, for in-service professional development. Each teacher can accumulate up to 24.75 credit units for such activities; each credit unit translates to 1.2% of the basic salary.

244. The percent of teachers who receive credits for in-service courses and professional development is growing from year to year. In 1996, 72% of all teachers in the official educational system were given an average of 9.5 credits each. In 2000, 85% of all teachers in the official educational system were entitled to in-service training credits, an increase of 20% in comparison with 1996. The average number of credits per teacher in 2000 has also increased to 13.95, an increase of 30%. On average, a teacher with ten years of experience gains 10 credit units and a teacher with thirty-five years of experience reaches 14 credit units.

245. Table 6.3 displays the percentage of teachers entitled to incentives and the average number of incentives by teachers' level of education in the year 2000. As shown, teachers with academic degrees receive the highest number of credit units: teachers with a PhD are entitled to 20 credit units on average, teachers with a Master's degree are entitled to 18 credit units on average and teachers with a Bachelor's degree are entitled to 16 credit units on average. The lowest number of credit units is gained by certified teachers and non-certified teachers who are each entitled to an average of 7 credit units (Ministry of Education, 2002c).

6.3.4 Incentives and individual contracts

246. Since 1975, special incentives were awarded by the Ministry of Education in order to promote the move of experienced teachers from central districts to peripheral ones, termed "high national-priority districts". Among the incentives given are ones related to accommodation, tuition waivers etc. In the 1990s, the number of localities entitled to such incentives increased by 162%, mainly due to the large wave of immigration from the former USSR. In 2003, 430 localities were appointed high priority localities, with 600 educational institutions and 23,500 teachers awarded the above incentives. In 1999, the average additional salary per person per year was 8,000 NIS; altogether, 22,000 teachers were paid a total of 184 million NIS.

247. Another incentive, initiated in the 1990s, involved personal one-year contracts for experienced teachers who volunteered to work in high-priority localities. On this contract, teachers receive very high salaries but they waive their right to any social benefits, usually an integral part of any civil servant's salary. In 1999, the average additional salary for a person working on a private contract was 46,000 NIS per year, which is six times that of the previous incentive system (State Comptroller's Report, 2000: p. 382). Due to the teachers unions' objection to teachers' employment by personal contracts, it was agreed in a collective salary agreement that only a limited number of teachers – not more than several hundreds – would be allowed to work in such conditions. However, the percentage of teachers who took advantage of this option in 1997 was only 22% of the allowed quota of 1,100 teachers. According to a report of the State Comptroller, this personal contract system was never evaluated by the Ministry of Education so as to examine whether it led to improvement in learning outcomes in the high priority localities.

6.3.5 Options for additional earning

248. The educational system offers a possibility to earn more than one salary by extending one's working hours to more than one teaching post, i.e., working beyond 100%. This possibility, which permits up to 140% of a salary, depends upon a school's needs and is only offered on special request.

249. The number of teachers working overtime is not high. In 1999, only 8% of the primary school teachers and 13% of the secondary teachers were working overtime. In the upper-secondary schools there are more teachers in the Arab sector as opposed to teachers in the Jewish sector that work overtime (18% vs. 13%) (CBS, 2002d).

250. Teachers are not legally constrained to working within the educational system and can find other jobs and sources of income, with the exception of paid private tutoring to students studying in the same school in which the teachers work. Since additional work, beyond the educational system, does not require any reporting, there are no official data on the number of teachers actually taking this option. It can be assumed that teachers, who earn low salaries, would look for additional sources of income. Yet, since many of the teachers are women, who also have home duties, the number of teachers working outside the educational system may not be large. It should also be noted in this respect that there is a fairly high taxation rate on extra earnings in Israel, which reduces the attractiveness of working in additional jobs.

6.3.6 Teaching workloads, class size and availability of support staff

251. Teachers' full time work unit in primary school is 30 weekly hours and 24 hours in secondary school, i.e., teachers in primary schools teach 25% more than teachers in secondary schools. The annual total for an average teacher working a full time post is 992 hours.

252. Arab teachers teach more hours than their colleagues in Hebrew education: about 53% of the Arab primary school teachers teach between 25 to 29 hours per week as compared with only 30% among the primary school teachers in Hebrew education; 18% of Arab secondary school teachers teach more than 30 hours per week in comparison with 12% in the equivalent level in Hebrew education (CBS, 2002d). This phenomenon is explained by a high percentage of women teachers in the Hebrew educational system preferring part time jobs. This allows them to stay at home and still benefit from social compensations given to working mothers in the civil service. Males, who are not given these benefits, expand their teaching posts by working additional hours. This occurs especially in the Arab sector where there are more male teachers than in Hebrew education.

253. Although the number of weekly hours in the teaching profession is relatively low compared both to other similar occupations as well as to the average working hours in the labor market, teachers' workload is affected by numerous unpaid non-teaching duties such as student evaluation, lesson planning and preparation, mentoring, conferences with parents, staff meetings, pedagogical counseling, etc.

254. Teachers' workload is also measured in terms of classroom density and the pupil/teachers ratio per class. A special circular of the Ministry of Education (1966, Special Circular 17.6.66) stipulates that the maximum number of students per class allowed is forty. In reality this number is lower with an average of 27 students per class in Hebrew education and an average of 29 students per class in the Arab and Druze sectors. The average number of students per class in lower-secondary schools is the highest in all sectors. There have been no changes in this respect in the past ten years (Table 6.4) (Sprinzak et al., 2003).

255. Teachers are not required to compensate for the absences of other teachers and do not receive any extra duties in such cases. A special quota of extra hours is allocated to fill in for teachers' absences - 60

hours per year per class for primary school and 45 hours in the lower-secondary school. Teachers working hours are, thus, not affected due to other teachers' absences.

6.3.7 Discipline and safety problems

256. Coping with violence in schools is regarded as one of the main burnout factors among teachers. According to the data obtained by an evaluation study carried out by the Evaluation Unit at the Ministry of Education, only a quarter of all teachers report on having a satisfactory relationship with their students. This attitude is not affected by teacher characteristics such as years of experience or whether or not a teacher functions as a homeroom teacher. However, teachers' satisfaction is affected by the level of education in which they teach. The lowest level of satisfaction was found among lower-secondary school teachers (10%) in comparison with primary and upper-secondary school teachers (60% in both). This low level of satisfaction is attributed to the heterogeneity and large size of classes in the lower-secondary schools (Schild & Assouline, 1997).

257. The number of students with discipline problems, as estimated by homeroom teachers, is 20%, consistently throughout all grade levels. About 50% of the teachers complained about having discipline problems, with half of them relating them to students' misbehavior. It was also found that discipline problems were treated either ineffectively or not at all in 30% of the cases. In another study dealing with the induction year of new teachers, it was reported that new teachers requested more help in solving discipline problems even though much emphasis was already given to such problems in the induction program (Schild & Carmeli, 1997).

258. In addition to discipline problems, violence has also been reported by teachers as a major problem. Since 1999, the Ministry of Education has been conducting a number of surveys regarding this urgent matter (Benbenishti, 1999, 2002; Harel, 1999). On the basis of these publications, several intervention programs were created and a number of special circulars dealing with violence prevention programs were published by the Ministry.

259. Despite the growing focus on violence prevention, most of the surveys have not related to violence towards teachers. Some data obtained lately from the Third International Mathematics and Science Study – TIMSS-1999, Martin, et al., 2000, Mullis, et al., 2000, reveal that the average frequency at which school staff in lower-secondary schools is required to cope with bullying and intimidations is higher compared to other countries. For example, it was found that 15% on average of the students report on monthly occasion of bullying and intimidations as opposed to an international figure of 5% only. Furthermore, 17% on average report on no violence at all, a figure which is compared with an international average indicator of 54%. In addition, 8% on average reported on violent behavior against teachers on a weekly or daily basis compared with an international figure of 4%.

260. In another survey, conducted recently by the teachers union, violence and discipline problems were mentioned by 74% of all teachers as the most cardinal problems they face. Furthermore, 64% of all teachers, mainly kindergarten and upper-primary teachers claimed they do not have sufficient knowledge or means to encounter discipline problems, misconduct and violence. Amongst the causes of violence, teachers pointed out the lack of parental authority (41%), lack of means for sanctions and punishment within schools (28%), and parents' low esteem of teachers (14%) (Smith & Pniel, 2003). A recently published circular mentions regulations, norms and values that should be implemented in cases of violence against teachers (Ministry of Education, 2003b, Circular 73/6).

6.4 Managing ineffective teachers

6.4.1 Teachers' evaluation regulations

261. Teacher evaluation is carried out mainly in the early phases of teachers' career prior to their obtaining tenure, and it involves three stages. The first stage takes place during student teachers' third year of studies at the teachers college and refers to their personal record as it has accumulated over the years. At this stage, dropping out of college is very rare.

262. The second evaluation stage occurs during the teachers' induction year, i.e., the first year of teaching, which may be the fourth and last year of college. Teacher evaluation at this stage contributes to the improvement of the selection mechanisms and is based on frequent feedback given to the new teachers by a personal tutor. This formative evaluation is given throughout the whole year in collaboration with the school's principal. Towards the end of the year, a summative evaluation is provided by a committee at the school which is convened to evaluate the new teacher. In case of failure, the new teacher is requested to repeat his or her induction year. In case of repeated failure, the candidate is not given a teaching license. Usually, at the end of the first trial year, all new teachers are dismissed due to administrative reasons then to be rehired in the following year.

263. A study that checked the way in which schools cope with the need to evaluate their new teachers during their induction period show that evaluation is the weakest link in the induction year. It was found that schools do not have enough expertise in evaluation procedures, many of the school principals are unfamiliar with the relevant procedures, such as the forms that need to be filled in; evaluation committees turn out not to exist in many of the schools and schools are often still debating the criteria and evaluation processes they will eventually use (Zuzovsky, Gesser, & Niv, 2002).

264. The third and last stage of evaluation occurs during the second year of teachers' work and is usually carried out by the school inspector. There is no connection between the results of this evaluation and the previous one carried out at the end of the induction year. If, by the end of the second year, the new teachers do not receive any negative opinion, they will become permanent teachers within the system.

265. Once teachers are tenured they do no longer get evaluated. Teachers may stay within the educational system until their retirement, unless principals are dissatisfied with their performance and start a procedure of dismissal on pedagogical grounds.

6.4.2 Teachers' dismissal procedures

266. Teachers' dismissal is done mainly at the district level, under the responsibility of the local supervisory board. The regulations for dismissing a permanent teacher on pedagogical grounds are identical in all public education institutions and include several stages lasting at least two years. Dismissal procedures commence with the school principal applying to the school inspector complaining about a teacher's inappropriate pedagogical performance. From this point on, the principal is no longer involved in the process and it is up to the inspector to conduct visitations, fill-in evaluation reports, discuss the candidate's future in inspectorate meetings, send warning letters to the teacher, etc. Lastly, a special committee is convened with representatives from the Ministry of Education, teachers union, and the district inspectorate, to discuss the specific case.

267. Table 6.5 presents the number of teachers who received a dismissal warning based on pedagogical grounds and the number of teachers who were actually fired on pedagogical ground as well as for administrative reasons in the years 1992-1999. The number of dismissal warnings is indicative of the

number of teachers who were eventually fired on pedagogical grounds. As noted in Table 6.5, the number of dismissed teachers is not large. In 1992, only 17 teachers were dismissed, in 1995, 86 teachers were dismissed and in 1999, 238 teachers were dismissed (Ministry of Education, 2001b). This relatively low number of dismissals does not reflect the high quality of teachers. It rather reflects the lack of an efficient screening system, a fear from taking drastic measures against teachers and facing legal actions, as well as an attempt to avoid confrontations with teachers unions. However, it should be noted that the Association of Secondary School Teachers recently suggested evaluating teachers' outcomes as a way of mobilizing teachers towards higher achievements (The Association of Secondary School Teachers, 2000).

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ANNEX 1: TABLES

Table 1.1 Sources of Population Growth 1990 - 2001*

	Population at the beginning of period	Natural increase	Migration balance	Population at end of period	Percent of annual growth	Percent of migration balance of total growth
1990-1995 Total	4,559.6	465.9	593.5	5,619.0	3.5	56.0
1996-2001 Total	5,612.3	560.3	336.3	6,508.8	2.6	37.5
Jews and others 1996-2001	4,607.4	349.8	325.2	5,281.3	2.3	48.3
Arab population 1996-2001	1,004.9	210.5	11.1	1,227.5	3.4	5.0

Note: *Estimates of population from 1995 onwards are based on 1995 census
Source: Central Bureau of Statistics (CBS) (2002a) - Statistical Abstract of Israel (SAI) 53 – Table 2.2

Table 1.2 Population, by Population Group and Age 1995 - 2001 (000s)

	All population groups ages 0-75 Total	Average annual growth of total population 1995-2001	Ages 0-4 pre-compulsory	Average annual growth rate ages 0-4 1995-2001	Ages 5-14 elementary & junior high	Average annual growth rate ages 5-14 1995-2001	Ages 15-19 high school	Average annual growth rate ages 15-19 1995-2001
Total population (000s)								
1995	5,612.3		574.1		1,074.3		511.7	
2001	6,508.8	2.5%	668.4	2.7%	1,180.9	1.59%	561.1	1.55%
Jews and others – (000s)								
1995	4,607.4		410.7		827.2		401.5	
2001	5,281.3	2.3%	473.1	2.38%	870.7	.86%	443.8	1.68%
Arab population (000s)								
1995	1,004.9		163.3		247.1		1,10.3	
2001	1,227.5	3.3%	195.3	3.03%	310.2	3.86%	1,17.3	1.03%

Source: CBS (2002a) -SAI 53 – Table 2.20

Table 1.3 Projected Population Groups in Israel 2005-2020, by Population Groups and Age (000s)

All	2000	2005	Five year growth (%)	Annual growth (%)	2010	Five Year growth (%)	Annual growth (%)	2020	Ten year growth (%)	Yearly Growth (%)
Total population	6,369.3	6,930.0	8.8	1.54	7,534.4	8.7	1.54	8,672.9	15.1	1.31
Ages 0-4	654.7	694.9	7.6	1.50	736.6	6.1	1.44	757.4	2.7	1.10
Ages 5-14	1,162.5	1,247.2	7.3	1.49	1,354.4	8.6	1.54	1,517.1	12.0	1.28
Ages 15-24	1,089.4	1,142.3	4.9	1.37	1,197.0	4.8	1.37	1,369.3	14.4	1.31
Ratio of ages 0-14 to ages 65+	2.92	2.9			2.9			2.2		
Jews and others										
Total population	5,180.6	5,572.9	7.6	1.50	5,979.8	7.3	1.49	6,697.1	12.0	1.28
Ages 0-4	464.8	492.3	5.9	1.43	521.4	5.9	1.43	520.0	-.03	
Ages 5-14	864.2	899.4	4.1	1.33	967.7	7.6	1.50	1,072.7	10.9	1.27
Ages 15-24	863.8	892.6	3.3	1.27	899.7	0.8	0.96	983.1	9.3	1.25
Ratio of ages 0-14 to ages 65+	2.27	2.2			2.2			1.4		
Arab population										
Total population	1,188.7	1,357.1	14.2	1.70	1,554.6	14.6	1.71	1,975.8	27.1	1.39
Ages 0-4	189.9	202.6	6.7	1.46	216.2	6.7	1.46	237.4	9.8	1.26
Ages 5-14	298.3	347.8	16.6	1.75	386.7	11.2	1.62	444.4	14.9	1.31
Ages 15-24	225.6	249.7	16.7	1.76	297.3	19.2	1.81	386.2	29.9	1.40
Ratio of ages 0-14 to ages 65+	13.41	12.4			10.5			7.4		

Sources: CBS (2001b) - SAI 52 – Table 2.27; CBS (2002a) - SAI 53 – Table 2.27

Table 1.4 Employed Persons and Employees in Education 1993 - 2001

Year	Number of persons employed (000s)	Unemployed from civilian labor force (%)	Persons employed in education from civilian labor force (%)	Total no. of employees from civilian force (000s)	Employees in education from total of civilian employees (%)
1993	1,750.8	10.0	12.2	1,450.5	14.0
1994	1,871.0	7.8	12.0	1,558.0	13.6
1995	1,964.9	6.9	12.1	1,662.6	13.4
1996	2,012.8	6.7	12.1	1,694.3	13.6
1997	2,040.2	7.7	12.1	1,727.1	13.6
1998	2,072.5	8.5	12.7	1,761.9	14.1
1999	2,136.6	8.9	12.6	1,815.0	14.0
2000	2,221.2	8.8	12.4	1,906.1	13.7
2001	2,270.5	9.3	12.6	1,966.3	13.9

Note: Definition of civilian labor force employed persons, employees, etc. in CBS (2002a) - SAI 53 introduction to Chapter 12

Sources: CBS (2001b) - SAI 52 – Table 12.11; CBS (2002a) -SAI 53 – Table 12.11

Table 1.5 Persons Employed in Education Compared to the Total Number of Persons Employed 1989 - 2001

Period	No. of persons employed in civilian work force		Persons employed in education		
	Average of persons employed (000s)	Part-time workers (%)	Average of persons employed (000s)	Part-time workers (%)	Total no. of persons employed in education from civilian labor force (%)
1989-1991	1,512	28.3	188	48.5	12.4
1992-1994	1,758	27.3	215	48.2	12.2
1995-1997	2,043	26.5	247	45.8	12.1
1998-2000	2,143	26.5	267	47.9	12.5
2001	2,271	27.5	283	49.4	12.5

Sources: Sprinzak et al. (2001) - Facts and Figures 2001 – p. D 73; CBS (2002a) - SAI 53 – Table 12.10

Table 1.6 National Expenditure on Education by Type of Institution and Main Services 1990 - 1998

Budget years	National expenditure in NIS millions at 1995 Prices	Types of Institutions				Fixed capital formation	Grand total at current price as % of gross national income
		Pre-primary educational institutions	Primary educational institutions	Secondary educational institutions	Post-secondary & higher ed. institutions		
1990	17,715	1,744	4,976	4,980	3,846	1,120	8.5
1995	23,028	2,200	6,764	6,498	4,781	2,309	9.5
1997	24,452	2,360	7,120	6,785	5,288	2,655	9.9
1998	25,353	2,427	7,330	7,035	5,433	2,699	9..9

Source: CBS (2002a) - SAI 53 - Table 8.5

Table 1.7 Total Expenditure on Educational Institutions as Percentage of GPD in Israel and on Average in Member Countries of OECD 1994; 1989, and 1999

	1994	*1998	*1999
Israel	8.9	8.9	8.4
Members of OECD	6.2	5.8	5.7

Note: * Net taxes on import were added to GDP
Sources: CBS (2002a) - SAI 53 - Table 28.14; CBS (2001b) - SAI 52 - Table 28.9; CBS (1999c) - Education and educational resources in Israel 1990-1999 - Table 4.1

Table 1.8 National Expenditure on Education per Student for Public and Private Institutions by Level of Education (in US Dollars Converted using PPP) 1998 - 1999

Level of education	1998*			1999**	
	Israel	OECD average		Israel	OECD average
Pre-primary	3,034	3,883		3,415	3,746
Primary	4,054	3,915		4,240	3,900
Secondary including junior-high	5,016	5,625		5,164	4,929
Post-secondary including higher ed.	10,556	11,720		11,210	11,425
Post-secondary	8,249	--		7,965	--
Higher education	11,178	--		12,088	--

Sources: *CBS (2001b) - SAI 52 - Table 28.9
**CBS (2002a) -SAI 53 - Table 28.14

Table 1.9 Expenditure on Educational Institutions as a Percentage of GDP by Levels of Education - 1998

	Public sector	Private sector
	% of GDP 1998	
Israel – All	7.30	1.60
Primary and secondary	4.80	0.30
Post-secondary and higher ed.	1.30	.70
Average OECD - All	4.64	1.11
Primary and secondary	3.47	0.35
Post-secondary and higher ed.	1.06	0.29

Source: CBS (1999c) -Education in Israel – An International Comparison 1999 - Table a; 9; 10.

Table 1.10 Ministry of Education Budget and Teachers' Salaries 1996 - 2000

Year	Total Ministry of Education budget	Teachers' salary from total budget of the Ministry of Education	Teachers' salary – % of total budget of the Ministry of Education
1996	19,802.000	14,733.928	74
1997	19,957.000	14,536.179	73
1998	20,607.000	14,294.683	69
1999	20,806.000	14,551.415	72
2000	20,612.000	14,739.935	72

Source: Advacenter: www.adva.org/ivrit/idkun/Budget2000idkun.htm

Table 1.11 Annual Expenses in Education: Change in Cost Per Yearly Instruction Hours*: From 1996 – 2003 (in NIS 2003 prices)**

	1996	2003	In Percentage
Kindergarten	4,112	3,854	-6.3%
Primary school	4,563	4,280	-6.2%
Lower secondary school	5,410	4,941	-8.7%
Upper secondary school	6,211	5,456	12.2%
Teacher training institute	11,812	11,364	3.8%

Note: * Cost of a government-employed teacher (in kindergarten, primary and lower secondary and teacher training) does not account for pension costs.
Cost of non-government employed teacher (in upper secondary) includes pension costs.
** 1996 costs in 2003 prices – based on increase in the general consumer price index (31.7%) from 1996-2003 and increase of 1% in 2003.

Source: Ministry of Education, Budget Books and Estimations. Sprinzak et al., 2003 Table B12

Table 1.12 Teacher Education and Inservice Teacher Training Administration Budget (2003)

Domain	Items	Total budget of teacher education and inservice administration (Current Prices)	
		NIS (000s)	%
Pre-service	Colleges of education	805.633	
	Student teacher loans	25.554	
		831.187	49
Teachers conditions	Service conditions	128.735	
	Special activities for teachers	21.482	
	Incentives for teachers	30.726	
	Educators in local authorities	0.964	
		180.443	10
Professional development	Teacher centers	19.321	
	Inservice activities	95.463	
	Inservice activities for senior staff	8.400	
	Funds and loans for teachers' professional activities	605.395	
		710.629	41
Total		1,741.723	100

Source: Ministry of Education (2003) -The 2003 Budget Book: Jerusalem.

Table 2.1 Input and Output in Hebrew and Arab Education

	Hebrew sector	Arab sector
Average no. of hours per pupil*	1.97	1.64
No. of students per FTP**	8.6	11.6
Enrolment rates, ages 14-17	96%	80.5%
Percentage of 17 year old students entitled to matriculation certificates	46%	24%
Annual student dropout rate between 9th – 12th grade	4.9	9.8%

Note: * Total school hours / number of pupils
** FTP = Full time position

Source: Sprinzak et al. (2003) - The educational system in Figures 2003 - Table - C9; C11; C23, F1– Ministry of Education, Economic and Budgeting Administration.

Table 2.2 Average Hours per Class and per Pupil by Level of Education in Hebrew and Arab Education 1990 and 2002

	Average hours per class			Average hours per pupil		
	1990	2002	Growth (%)	1990	2002	Growth (%)
Hebrew						
Primary	38	46	21	1.5	1.9	27
Lower secondary	51	56	10	1 .7	1.8	6
Upper secondary	58	61	5	2.1	2/3	10
Arab						
Primary	34	45	32	1.1	1.5	36
Lower secondary	44	48	10	1.3	1.5	15
Upper secondary	47	56	19	1.5	2.1	40

Source: Sprinzak et al. (2003) -The educational system in Figures 2003 - Table – C22; C23 – Ministry of Education, Economic and Budgeting Administration.

Table 2.3 Schools in the Educational System at Three Points in Time (1948/9; 1989/90; 2001/2)

Grand total	**3700**					
	Hebrew education			Arab education		
Year	1948/9	1989/90	2001/2	1948/9	1989/90	2001/2
Total	565	2,012	**3,071**	46	420	**629**
Primary total	467	1,392	**1,958**	45	330	**433**
Regular	467	1,204	1,770	45	309	393
Special education	--	188	188	--	21	40
Post-primary - total	98	620	**1,202**	1	90	**222**
Lower secondary (including special education)	--	304	502	--	69	112
Upper secondary (including special education)	98	538	1065	--	93	154
Secondary – one track	--	348	739	--	61	59
Secondary – multi-track	--	190	325	--	32	100
Secondary - general	39	340	633	1	80	84
Secondary – technological/vocational	26+33	313+50	104	--	43	16
Agriculture	--	24	2	--	2	--

Note: Schools that cover more than one level of education, e.g., that have both primary and lower-secondary classes, were counted separately in each level of education, but were counted only once in the total number of schools.

Source: CBS (2002a) - SAI 53 – Table 8.6

Table 2.4 Pupils in Educational Institutions 1989/90; 1994/5; 1999/00, and 2001/02

	1989/90**	1994/95*	1999/00	2001/02	Growth (%) 1989/90 - 2001/02
Total pupil population					
Grand total	1,006.935	1,152.300	1,304.800	1,343.800	33
Primary	612,600	685,700	740,200	760,200	24
Lower secondary	149,500	182,400	242,800	244,200	63
Upper secondary	244,800	284,200	321,800	339,400	39
Hebrew education					
Grand total	799,128	924,600	1,025.900	1,038.700	30
Primary	482,200	540,300	558,600	562,300	17
Lower secondary	103,100	142,700	195,000	191,900	86
Upper secondary	176,100	241,600	272,300	284,500	62
Arab education					
Grand total	207,807	227,700	278,900	305,100	47
Primary	138,800	145,400	181,600	197,900	43
Lower secondary	20,300	39,700	47,800	52,300	58
Upper secondary	31,200	42,600	49,500	54,900	76

Note: * 1994/95 data do not include 25,000 pupils in religious Talmud-Torah schools
**1989/90 data from Facts and Figures 2001, pp. D55-57
Source: Ministry of Education Budget Book, 2003

Table 2.5 Pupils in Schools, by Supervision and Levels of Education (%) at Two Points in Time 1989/90 and 2000/01

		State-secular	State-religious	**Ultra-Orthodox		State-Arab	State-Druse
Primary	1989/90	71	21	8	1993/4*	64	63
	2000/01	60	19	21	2000/1	66	58
Lower secondary	1989/90	83	16	1	1993/4*	16	25
	2000/01	81	19	-	2000/1	47	23
Upper secondary	1989/90	76	18	6	1993/4*	20	19
	2000/01	68	17	15	2000/1	53	19

Source: CBS (2002a) - SAI 53 – Table 8.15
**Source*: CBS (1995) - SAI 46 – Table 22.17
** From 1988 this also includes pupils in religious Talmud-Torah schools

Table 2.6 Teachers in Primary and Post-Primary Education (Hebrew and Arab Education) by Level of Education at Four Points in Time*

		Total	Primary	Secondary		
				Total	Lower secondary	Upper secondary
1992/1993	**Grand total**	89,509	47,720	43,154	18,352	30,529
	Hebrew education	76,993	40,375	37,691	15,582	27,472
	Arab education	12,516	7,345	5,463	2,770	3,057
1997/1998		102,648	59,936	50,876	19,523	35,651
	Hebrew education	86,300	44,100	44,000	16,000	31,800
	Arab education	16,000	9,830	6,876	3,535	3,821
1999/2000		121,400	61,300	62,900	30,000	42,300
	Hebrew education	102,200	49,700	54,500	25,600	37,900
	Arab education	19,200	11,600	8,400	4,400	4,400
2002/2003		127,000	62,500	67,500	31,000	47,000
**	Hebrew education	106,000	50,000	58,000	26,000	42,000
**	Arab education	21,000	12,500	9,500	5,000	5,000

Note: *Teachers teaching in more than one level of education are counted in each level but appear in the total count only once

**Estimates based on the Ministry of Education Budget Book 2003

Source: CBS Teaching staff Surveys 1994a (1992/3); 2001e (1997/8); 2002d (1999/2000).

Table 2.7 Ratio of Students per Full-Time Work Unit 1992/3 and 1999/2000

	Primary		Secondary	
Year	1992/3	1999/2000	1992/3	1999/2000
Grand total	12.8	12.1	10.0	9.0
Hebrew total	12.0	9.9	9.4	8.6
Portion of State-secular	12.7	12.1	9.8	9.0
Portion of State-religious	9.7	9.9	8.3	6.7
Arab total	16.6	15.6	14.0	11.6

Source: Sprinzak et al. (2003) - The Educational System in Figures 2003 - Table D5

Table 2.8 Ratio of Teachers per Full-Time Equivalent (FTP) 1992/3; 1999/2000, and 2002/3

Level of Educational System	1992/3	1999/2000	2002/3
Primary	1.5	1.4	1.4
Lower secondary	1.5	1.2	1.7
Upper secondary	1.3	1.4	1.4
Hebrew education			
Primary	1.5	1.4	1.4
Lower secondary	1.6	1.3	1.8
Upper secondary	1.4	1.4	1.5
Arab education			
Primary	1.3	1.4	1.2
Lower secondary	1.3	1.2	1.5
Upper secondary	1.1	1.0	1.0

Source: CBS - Special Analysis 2003

Note: These data refer only to teachers getting their salaries directly from the Government and not from any organized bodies outside the educational system.

Table 2.9 Teachers in Primary and Post-Primary Education by Selected Characteristics 1992/3; 1997/8, and 1999/2000

Primary education									
	Educational system			Hebrew education			Arab education		
	1992/3	1997/8	1999/2000	1992/3	1997/8	1999/2000	1992/3	1997/8	1999/2000
Women (%)	84.9	83.6	83.0	90.4	88.0	89.6	53.7	63.9	66.2
Age up to 29	17.8	22.0	21.1	16.5	16.6	18.3	25.8	32.9	32.7
Age 50 and over	10.5	13.9	15.2	11.2	15.3	16.9	6.8	7.4	8.0
Median age	--	--	--	38.7	39.5	40.3	35.8	35.6	35.7
Median years of experience	--	--	--	13.7	13.0	13.0	14.9	9.9	15.2
Rate of teachers with academic degree (%)	22.5	43.3	46.0	24.0	47.5	48.3	14.5	24.5	36.3
Rate of unqualified teachers(%)	5.2	7.1	4.8	4.9	6.3	4.0	6.8	10.7	8.0
Secondary education									
	Educational system			Hebrew education			Arab education		
	1992/3	1997/8	1999/2000	1992/3	1997/8	1999/2000	1992/3	1997/8	1999/2000
Women (%)	65.0	68.3	69.2	70.2	73.1	74.1	29.7	37.2	38.3
Age up to 29	13.9	14.2	22.3	12.2	12.7	10.6	25.2	23.4	22.6
Age 50 and over	18.1	23.0	25.0	19.4	24.9	28.1	9.9	10.4	11.6
Median age	--	--	--	41.7	42.8	43.6	36.0	36.7	37.3
Median years of experience	--	--	--	16.0	16.7	17.8	11.9	11.4	12.2
Rate of teachers with academic degree (%)	62.1	71.0	75.1	63.1	71.0	76.0	55.6	62.2	68.4
Rate of unqualified teachers(%)	2.8	2.0	1.6	2.4	1.7	1.4	5.6	3.9	3.3

Source: CBS- Teaching Staff Surveys – (1994a) 1992/3; (2001e) 1997/8; (2002d) 1999/2000 – Tables 1, 2 in all surveys and B, C in 1997/8 survey

Table 2.10 Teacher Characteristics – 1999/2000 by Level of Education

	Primary education 1999/2000		Post-primary education 1999/2000	
	Hebrew	Arab	Hebrew	Arab
Women teacher (%)	84.5%	63.7%	67.5%	36.4%
Median age (years)	40.3	35.7	43.6	37.3
Median years of experience	13.0	15.2	17.8	14.6
Rate of teachers with academic degrees (%)	45.5%	34.6%	75.2%	63.8%
Rate of unqualified teachers (%)	3.8%	7.6%	1.2%	3.1%

Source: CBS (2002a) - SAI 53 – Table 8.28

Table 3.1 Number of Students Entering Initial Teacher Education Programs 1995 - 2001*

	Total no. of students in colleges of education	Colleges of education		Total no. of students in university schools of education	**Grand total** 1st year student teachers
		Ultra-Orthodox in nos. and % of 1st year students in colleges	Arab-speaking students in nos. and % of 1st year students in colleges		
1995	5,968	1,100 (18%)	164 (3%)	937	6,905
1996	6,733	1,259 (19%)	296 (4%)	1,044	7,777
1997	7,244	1,287 (18%)	329 (5%)	1,169	8,413
1998	7,706	1,584 (21%)	327 (4%)	1,321	9,027
1999	8,797	2,386 (27%)	424 (5%)	1,355	10,152
2000	9,030	2,206 (24%)	503 (6%)	1,334	10,364
2001	8,849	2,428 (27%)	611 (7%)	1,264	10,113

Note: *First year students in teacher colleges and universities
Source: CBS Special Analysis 2003 and data obtained from Teacher Education and Inservice Training Administration 1999

Table 3.2 Percentage of Students in Teachers Colleges Whose Mothers have Academic Degrees and Who Came from Large Families* by Type of Inspectorate 1996 - 2002

Year	Inspectorate	Mothers with academic degrees	Families with more than 6 siblings
1996/7	State secular	19	12
	State religious	44	23
	Ultra-Orthodox	16	46
1997/8	State secular	19	10
	State religious	40	25
	Ultra-Orthodox	17	59
1998/9	State secular	20	12
	State religious	37	26
	Ultra-Orthodox	15	60
1999/2000	State secular	19	14
	State religious	40	30
	Ultra-Orthodox	15	60
2001/1	State secular	19	-
	State religious	45	-
	Ultra-Orthodox	19	-
2001/2	State secular	17	15
	State religious	44	28
	Ultra-Orthodox	18	64

Note: * More than 6 siblings
Source: Ministry of Education, Teacher Educational and Inservice Training Administration

Table 3.3 Employment in Teaching of Graduates in their Last Year of Study Toward a Teaching Certificate by Gender by Number of Years Between Year of Graduation and Year of Entrance to Teaching (Hebrew and Arab Education) 1991 - 1994

Last Year of Study		Graduates		Total %	Thereof:		Employed graduates by No. of years between graduation and entrance to teaching (%)		
					Unemployed in teaching	Employed in Teaching			
		Nos.	%		%	%	One year	Two years	Three years
1991/2	**Total Graduates**	5,336	100.0	100	29.9	70.2	54.1	11.1	5.0
	Men	1,074	19.9	100	46.9	53.1	38.5	9.1	5.5
	Women	4,262	80.1	100	25.6	74.4	58.0	11.6	4.8
1992/3	**Total Graduates**	6,532	100.0	100	33.2	66.8	54.2	12.6	--
	Men	1,109	16.7	100	51.8	48.2	38.7	9.5	--
	Women	5,423	83.3	100	29.4	70.6	57.4	13.2	--
1993/4	**Total Graduates**	7,532	100.0	100	44.1	55.9	5.9	--	--
	Men	1,290	17.1	100	59.8	40.2	40.2	--	--
	Women	6,242	82.9	100	40.8	59.2	59.2	--	--

Source: CBS (1997a) - Graduates of Teacher Training Colleges 1989/90 – 1993/4 Employed as Teachers 1990/1991 – 1994.95 – Tables 1, 2, 3, 4, 7

Table 3.4 Employment in Teaching of B.Ed. Recipients by Gender and by Number of Years Between Year of Graduation and Year of Entrance to Teaching (Hebrew and Arab Education) 1989 - 1994

Year of B.Ed. graduation	B.Ed. recipients	B.Ed. recipients		Total %	Thereof:		Employed as teachers by no. of years Between year of graduation and year of entrance to teaching %		
		Numbers	%		Unemployed in teaching %	Employed in teaching %	One year	Two years	Three years
1989/90	**All**	585	100	100	36	64.3	50.6	8.7	4.9
	Men	81	14	100	49	50.6	44.4	1.2	4.9
	Women	504	86	100	37	66.5	51.6	9.9	3.2
1990/91	**All**	741	100	100	22	71.8	65.5	3.1	3.3
	Men	79	11	100	42	57.0	49.4	3.8	3.8
	Women	662	89	100	26	73.6	67.4	3.0	3.2
1991/2	**All**	672	100	100	20	79.5	74.4	3.3	1.8
	Men	87	13	100	17	82.8	78.2	6.9	1.1
	Women	584	87	100	21	78.9	73.8	3.3	1.9
1992/3	**All**	1,015	100	100	23	77.0	75.9	1.2	-
	Men	152	15	100	30	69.7	38.8	2.0	-
	Women	863	85	100	22	78.3	30.4	1.0	-
1993/4	**All**	1,402	100	100	21	78.5	78.5	-	-
	Men	206	15	100	37	63.1	63.1	-	-
	Women	1,196	85	100	19	81.2	81.2	-	-

Source: CBS (1997a) -Graduates of Teacher Training Colleges 1989/90 – 1993/4 Employed as Teachers 1990/1991 – 1994.95 – Tables 9,10,11,12,13,16

Table 3.5 Employment in Teaching of Recipients of Teaching Certificates from Universities by Gender and Number of Years Between Year of Graduation and Year of Entrance to Teaching (Hebrew and Arab Education) 1989 - 1994

Year of B.Ed. graduation	B.Ed. recipients	B.Ed. recipients		**Total** %	Unemployed in teaching %	Employed in teaching %	Employed as teachers by no. of years between year of graduation and year of entrance to teaching %		
		Nos.	%				One year	Two years	Five years
1989/90	**All**	749	100.0	100	25.0	75.0	57.5	8.1	9.3
	Men	149	13.8	100	28.9	71.1	56.4	8.1	6.7
	Women	600	86.2	100	24.0	76.0	57.8	8.2	10.0
1990/91	**All**	802	100.0	100	21.8	78.2	67.3	6.6	4.2
	Men	130	16.2	100	25.4	74.6	64.6	4.6	5.4
	Women	672	83.8	100	21.1	78.9	67.9	7.0	4.0
1991/2	**All**	852	100.0	100	23.4	76.6	69.7	4.2	2.7
	Men	125	14.7	100	21.6	78.4	67.2	5.6	5.6
	Women	727	85.3	100	23.7	76.3	70.2	4.0	2.2
1992/3	**All**	1,063	100.0	100	31.3	68.7	65.1	3.6	-
	Men	197	18.5	100	38.1	61.9	59.4	2.5	-
	Women	866	80.5	100	29.8	70.2	66.4	3.8	-
1993/4	**All**	1,197	100.0	100	30.2	69.8	69.8	-	-
	Men	173	14.7	100	32.9	67.1	67.1	-	-
	Women	1,024	85.3	100	29.7	70.3	70.3	-	-

Source: CBS (1997a) - Graduates of Teacher Training Colleges 1989/90 – 1993/4 Employed as Teachers 1990/1991 – 1994.95 – Tables 18, 19, 20, 21, 22, 25

Table 3.6 Number and Origin of Newly-Appointed Teachers in Public Education by Year of Graduation (Primary and Secondary Education) 1995 - 2001*

	Total newly- appointed teachers		Graduated the previous year				Other beginning teachers			
	Primary	Secondary	Primary	%	Secondary	%	Primary	%	Secondary	%
1995	3,331	1,790	1,056	32%	431	24%	2,275	68%	1,359	76%
1996	3,338	1,929	949	28%	464	24%	2,389	72%	1,465	76%
1997	3,038	1,732	961	32%	428	25%	2,077	68%	1,304	75%
1998	3,716	1,916	1,086	29%	465	14%	2,630	71%	1,451	76%
1999	2,966	1,553	836	28%	395	25%	2,130	72%	1,158	75%
2000	2,750	1,409	961	33%	446	32%	1,789	65%	963	68%
2001	2,825	1,361	1,518	54%	622	46%	1,307	46%	739	54%

Note *Data related only to public education budgeted directly by the Government
Source: CBS (2003) - Special Analysis– Tables 4a; 4b

Table 3.7 Average Monthly Salary of Employees in the Labor Market and in Education 1990 and 1995 - 2001

Year	Employees' salaries (in Israeli Shekels - NIS)		Employees' salaries (in education)	
	Average monthly salary - current prices	Change from previous year in % (current prices)*	Average monthly salary - current prices	Change from previous year in % (current prices)**
1990	2,328	-1.1		
1995	4,335	1.9		
1996	4,915	1.4		
1997	5,493	2.6		
1998	5,914	2.1	4,995	1.7
1999	6,377	2.4	5,211	1.0
2000	6,835	6.0	5,478	4.4
2001	7,079	2.5	5,732	4

Sources: *CBS (2002a) - SAI 53 – Table 12.31
**CBS (2002a) - SAI 53 – Table 12.34

Table 3.8 Comparing Average Monthly Salary of Several Occupations

Occupation	Average monthly salary – 1997 in NIS (current prices)	Average monthly salary – 2001 in NIS (current prices)	Change in % (current prices)
Physicians	15,653.68	18,461.73	18.0%
Engineers	8,158.02	10,308.29	26.4%
Technicians	7,842.31	9,756.72	24.4%
Nurses	7,502.36	9,032.18	20.3%
Social workers	7,501.63	8,938.57	19.2%
Psychologists	5,457.63	8,517.89	56.0%
Teachers	5,553.84	6,565.6	18.2%

Source: Treasury, Department of Salary and Work Agreements.

Table 3.9 Non-University Teacher Education Institutions (Academic Colleges of Education and Non-Academic Teacher Seminars)

	1979/80	1984/5	1989/90	1994/5	1995/6	1996/7	1997/8	1998/9	1999/2000	2000/1	2001/2
Total no. of institutions	55	39	29	34	35	35	38	42	46	49	52
Academic	-	-	-	13	13	18	19	21	23	23	27
Students total	11,770	1,905	12,909	19,573	21,601	23,990	25,976	28,481	31,063	31,824	33,822
Students studying for B.Ed. degree	--	1033	4618	10,127	10,244	14,257	17,735	18,861	20,004	19,019	20,299
Students studying for a teaching certificate	11,770	11,872	8,291	9,446	10,819	9,733	7,591	9,620	11,059	12,805	13,523

Source: CBS (2002a) -SAI 53, Tables 8.31, 8.46, and 8.47

Table 3.10 Distribution of Entrance SAF Examination Score of First Year Regular Students in Teachers Colleges 1996/7 – 2002/3*

Scores	1996/7	1997/8	1998/9	1999/2000	2000/01	2001/02	2002/03
1 - 79	9.8%	9.7%	7.4%	7.3%	2.9%	3.6%	0.5%
80 – 84	28.2%	27.8%	26.7%	33.7%	35.1%	33.8%	25.5%
85 – 89	23.6%	24.3%	25.1%	26.9%	26.5%	26.9%	30%
90 +	38.4%	38.2%	40.8%	32.1%	35.4%	35.7%	44%
Total no. of students	5203	5823	5667	5341	5171	5029	5030
Average score	87	87	87	86	86	87	89

Source: Teacher Education and Inservice Training Administration 2003
*Not including private kindergarten teachers, Bedouin teachers and hostel teachers with special admission requirements

Table 3.11 Number of Students in Special Programs for Excellent Students in Teacher Colleges 1998 - 2003

Colleges by name	1998/9	1999/2000	2000/01	2001/2	2002/3	Total number
Hertzog			9	15	19	43
Efrata	10	10	7	11	25	53
Lipschitz (Students from January 2003)			4	5	17	9-26
Sea College			34	18	34	86
Gordon	4	2	-	-	-	-
Arab College Haifa		17	10	16	8	51
Beit Berl			14	36	36	86
Moreshet Yaakov	6	6	7	7	9	29
Beit Rivka			19	-	-	19
Levinsky			11	13	20	44
Kibbutzim	16	14	19	21	30	95
Technology			8	9	5	22
Talpiot	20	5	5	8	15	53
Orot Israel	14	24	14	21	26	99
Key	7	6	4	5	7	29
Achva	12	6	2	3	3	26
Washington			-	6	8	14
Chemdat Darom			-	8	10	18
Baaka El Garbia			-	-	10	10
Total	73	90	167	202	281	813

Source: Teacher Education and Inservice Training Administration 2003

Table 4.1 Graduates of Teacher Education Programs at Universities 1992 - 2001

	1992	1995	1996	1997	1998	1999	2000	2001
Total Graduates	853	1,187	1,374	1,312	1,194	1,307	1,360	1,366
Women	727	1,015	1,136	1,091	1,048	1,101	1,156	1,147

Source: CBS (2003) – Special Analysis 2003

Table 4.2 Number of Students in Teacher Training Colleges (Non-University Institutions)

	1979/80	1984/5	1989/90	1994/5	1995/6	1996/7	1997/8	1998/9	1999/2000	2000/1	2001/2*
Total no. of institutions	55	39	29	34	35	35	38	42	46	46	52
Academic				13	13	18	19	21	23	24	27
Total Students	11,770	12,905	12,909	19,573	21,601	23,990	25,976	28,481	31,063	31,824	33,822
lst degree & teaching certificate	--	1,033	4,618	10,127	10,244	14,257	17,735	18,861	20,004	19,698	20,299
Teaching certificate only	11,770	11,872	8,291	9,446	10,819	9,733	7,591	9,620	11,059	12,126	13,523
Hebrew education students	11,285	12,482	12,333	18,380	20,003	22,096	23,857	26,371	28,442	29,148	30,761
Males (%)	10.3	15.7	16.6	16.3	15.9	16.0	16.0	15.0	16.6	17.0	17.8
State secular	7,464	8,379	8,264	11,564	12,412	13,510	13,950	14,858	15,352	15,289	
State religious	2,648	2,779	2,684	4,119	4,563	5,031	5,725	5,890	6,743	6,760	
Ultra-Orthodox	1,173	1,324	1,385	2,697	3,028	3,555	4,182	5,623	6,347	7,099	
Arab education students	485	423	576	1,193	1,598	1,894	2,119	2,110	2,621	2,676	3,061
Males (%)	45.2	49.9	22.9	16.2	16.2	11.8	11.8	8.8	7.8	8.8	8.8

Sources: CBS (2002a) - SAI 53 - Table 8.30, 8.31; CBS (1999) -SAI 50 - Table 22.30; CBS (1995) - SAI 46 - Table 22.35; CBS (1997) - SAI 48 – Table 22.26
* 2001/2 data from Sprinzak et al. (2003). D6

Table 4.3 Number of Graduates (Final Year Students who Completed their Studies) from Initial Teacher Education Programs by Type of Certification 1998 - 2001

	1998/9	1999/2000	2000/2001
Final year students who completed their studies	5,753	6,772	9,215
B.Ed. recipients	3,519	4,368	4,697
Percentage of B.Ed. recipients of those who completed their studies in the previous year		76%	69%

Sources: CBS (2003) - Special Analysis Table 2; CBS (2002a) - SAI 53 – Table 8.47

Table 4.4 Practicing Teachers Applying for Continuing Studies in Teachers Colleges 1994 - 2000

	No. of teachers Applying for continuing studies		
Year	B.Ed. studies	Certificate and diploma studies	Total
1994/5	4,419	5,256	9,675
1995/6	5,406	5,747	11,153
1997/6	6,409	5,707	12,116
1998/9	8,295	7,454	15,749
1999/2000	6,271	5,236	11,509

Source: Teacher Education and Inservice Training Administration 2003

Table 4.5 Number of Teachers Participating in In-Service Activities 1999 - 2001

Year	1999	2000	2001
No. of participants	113,231	105,358	107,218
No. of in-service courses taken	12,164	12,520	11,503
Average no. of hours per in-service course	60	61	60
Average no. of in-service hours per participant	155	146	140

Source: Teacher Education and inservice training administration 2003

Table 5.1 Turnover Rate – Percentage of Teachers Leaving their Current Teaching Positions in Public Schools by their Destination 1991 - 2000

Year	Primary				Post-Primary			
	Total turnover rate (%)	To another public school	Temporary leave	Permanent leave	Total turnover rate (%)	To another public school	Temporary leave	Permanent leave
1991	20	41	33	25	22	23	35	43
1992	26	45	29	26	21	26	32	42
1993	26	44	24	32	21	36	27	37
1994	28	42	24	34	22	28	33	39
1995	24	42	23	34	26	27	31	42
1996	26	42	20	38	24	31	23	46
1997	26				24			
1998	27				23			
1999	24				24			
2000	24				25			

Note: Turnover rate is expressed as % of teachers who leave their teaching positions each year related to all teachers in public schools in the reference year

Source: CBS (2003) - Special Analysis 2003 – Table 5

Table 5.2 Percentage of Qualified Teachers in Public Schools 1991 and 1995 - 2001

Year	Public schools (including secondary Schools)		Primary	Lower secondary	Upper secondary	
	Less severe criteria	Severe criteria			Less severe criteria	Severe criteria
1991	57.7	49.3	83.5	30.1	34.2	7.6
1995	65.9	55.1	86.1	45.8	47.8	12.8
1996	68.5	57.0	86.9	50.1	52.0	14.1
1997	70.7	58.8	88.0	54.5	54.8	15.2
1998	73.7	60.6	88.1	59.9	59.3	17.0
1999	75.4	61.8	89.7	64.7	61.3	17.8
2000	78.8	65.1	90.9	70.4	66.4	22.2
2001	80.2	66.6	91.5	74.8	67.3	24.1

Source: CBS (2003) - Special Analysis 2003 – Tables 10a; 10b

Table 5.3 Percentage of Fully-Qualified Teachers in Upper Secondary Education Subjects 1991 and 1995 - 2001

Year	Language	Mathematics	Science	Foreign languages	Computer studies	Vocational education
1991	37.7	38.2	53.6	57.6	7.1	3.4
1995	41.5	52.7	59.2	69.5	7.2	7.3
1996	40.4	55.3	59.6	69.9	7.3	8.5
1997	41.9	56.2	60.5	70.5	8.2	9.5
1998	43.7	57.1	62.1	71.5	8.9	10.3
1999	43.5	58.7	61.2	72.4	9.3	10.1
2000	44.6	59.5	62.2	73.0	11.1	13.6
2001	43.8	58.2	61.0	71.9	11.9	15.0

Source: CBS (2003) - Special Analysis 2003 – Table 11

Table 6.1 Teacher's Retirement 1992 - 1999

Year	Number of retiring teachers			Reasons for retirement (%)			
	Total	State secular	State religious	Age 65 onwards	Voluntary retirement between ages 60-65	Retirement before age 60	Other*
1992	878	710	168	6%	16%	59%	19%
1993	929	723	206	4%	15%	62%	19%
1994	1,219	969	250	4%	15%	65%	16%
1995	1,333	1,206	127	5%	14%	67%	14%
1996	1,284	1,263	21	4%	13%	70%	13%
1997	1,598	1,206	127	3%	14%	56%	27%
1998	1,339	1,329	10	3%	16%	60%	21%
1999	1,339	1,333	6	3%	16%	60%	21%

**Note:* Health problems; mortality
Sources: Ministry of Education 2001b

Table 6.2 Teachers on Leave 1992 -1996

	Type of Leave		Reasons for taking leave (%)						
	Full	Partial	Maternity	Health	Studies	Sabbatical	Official duties	Personal /family	Other*
1992	6,257	1,211	3%	3%	8%	49%	8%	8%	21%
1993	6,838	1,379	4%	3%	7%	50%	8%	8%	20%
1995	8,821	2,390	8%	3%	7%	38%	8%	7%	29%
1996	9,290	2,823	8%	3%	7%	37%	8%	6%	30%

**Note:* Other reasons for taking leave
Source: Data on Teaching Force 1991-2000 – Ministry of Education

Table 6.3 Percentage of Teachers in Public Schools Receiving Incentives (Credit Points) in 1999/2000

Rank	Percentage of teachers from total amount in that rank receiving incentives			Average credit points per teacher		
	State secular	State religious	Other*	State secular	State religious	Other*
Ph.D.	82%	91%	92%	18.1	21.61	21.00
MA	91%	93%	92%	17.83	18.82	18.40
BA	91%	93%	95%	16.10	16.74	15.07
Certified advanced teacher	89%	87%	90%	11.74	11.30	9.68
Certified teacher	78%	87%	78%	6.96	7.30	6.34
Advanced certified supervisor	96%	98%	60%	14.63	15.96	3.33
Temporary certification	91%	80%	67%	11.66	9.38	9.50
Non-certified	0.5%	1.5%	1.1%	6.71	6.64	4.00
Total	84%	86%	88%	14.40	14.867	12.59
Average	85%			13.95		

Note: * Usually Ultra-Orthodox schools
Source: Ministry of Education 2000, Salary File

Table 6.4 Average Number of Students in Class by Level of Education

	1984/85	1989/90	1994/95	1997/98
Total	**27.6**	**27.8**	**28.1**	**27.8**
Primary	27.0	26.9	27.4	26.9
Lower secondary	29.7	30.6	30.8	31.6
Upper secondary	28.4	28.7	28.1	27.6
Hebrew Education				
Total	**26.8**	**27.1**	**27.4**	**27.1**
Primary	25.9	26.1	26.7	26.0
Lower secondary	29.2	30.0	30.2	31.0
Upper secondary	27.9	28.1	27.7	27.2
Arab Education				
Total	**31.4**	**30.9**	**30.9**	**30.8**
Primary	31.1	30.1	30.2	30.2
Lower secondary	32.5	33.1	33.5	34.0
Upper secondary	32.0	32.4	31.2	29.8
Druze education	29.4	30.8	30.3	30.1

Source: Sprinzak et al., 2000, Ministry of Education - Table C 22 and Sprinzak et al., 2003 - Table C 21

Table 6.5 Dismissal and Official Warnings of Teachers – 1992-1999 (%)

	Dismissal		Official warning		Total
	State secular	State religious	State secular	State religious	
1992	11	6	14	15	46
1993	18	8	26	11	63
1994	32	84	25	11	152
1995	53	33	20	2	108
1996	54	37	18	1	100
1997	44	36	29	12	121
1998	104	43	33	14	194
1999	188	50	25	6	269

Source: Ministry of Education, Teaching Personnel Administration 2001b

ANNEX 2

Exhibit 1: Structure of the Israeli Pre-primary, Primary and Secondary Education System 2000-2001

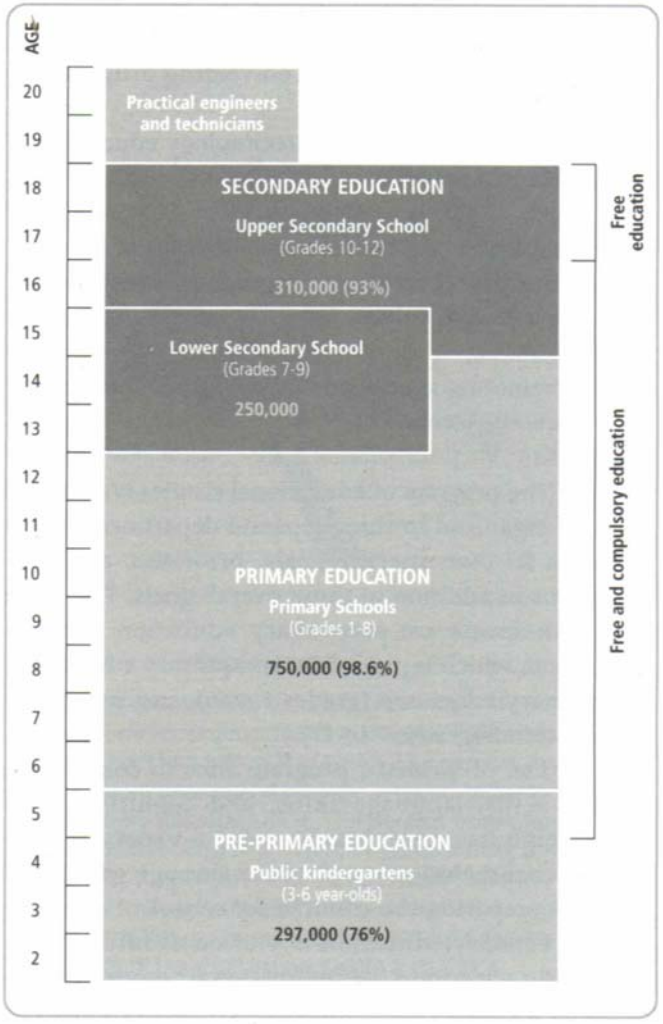
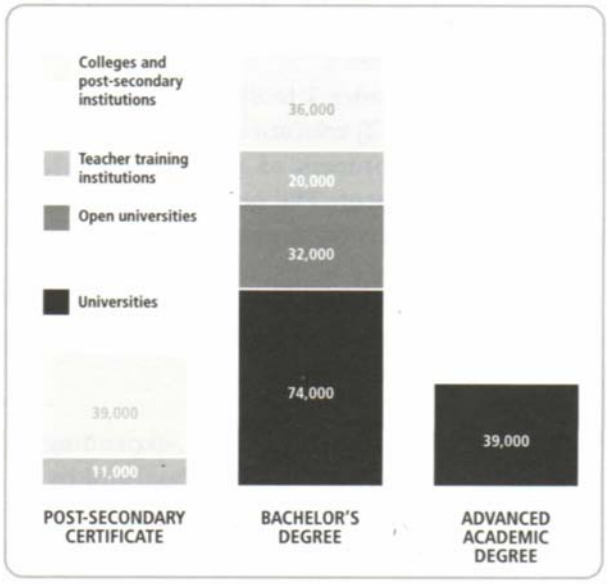
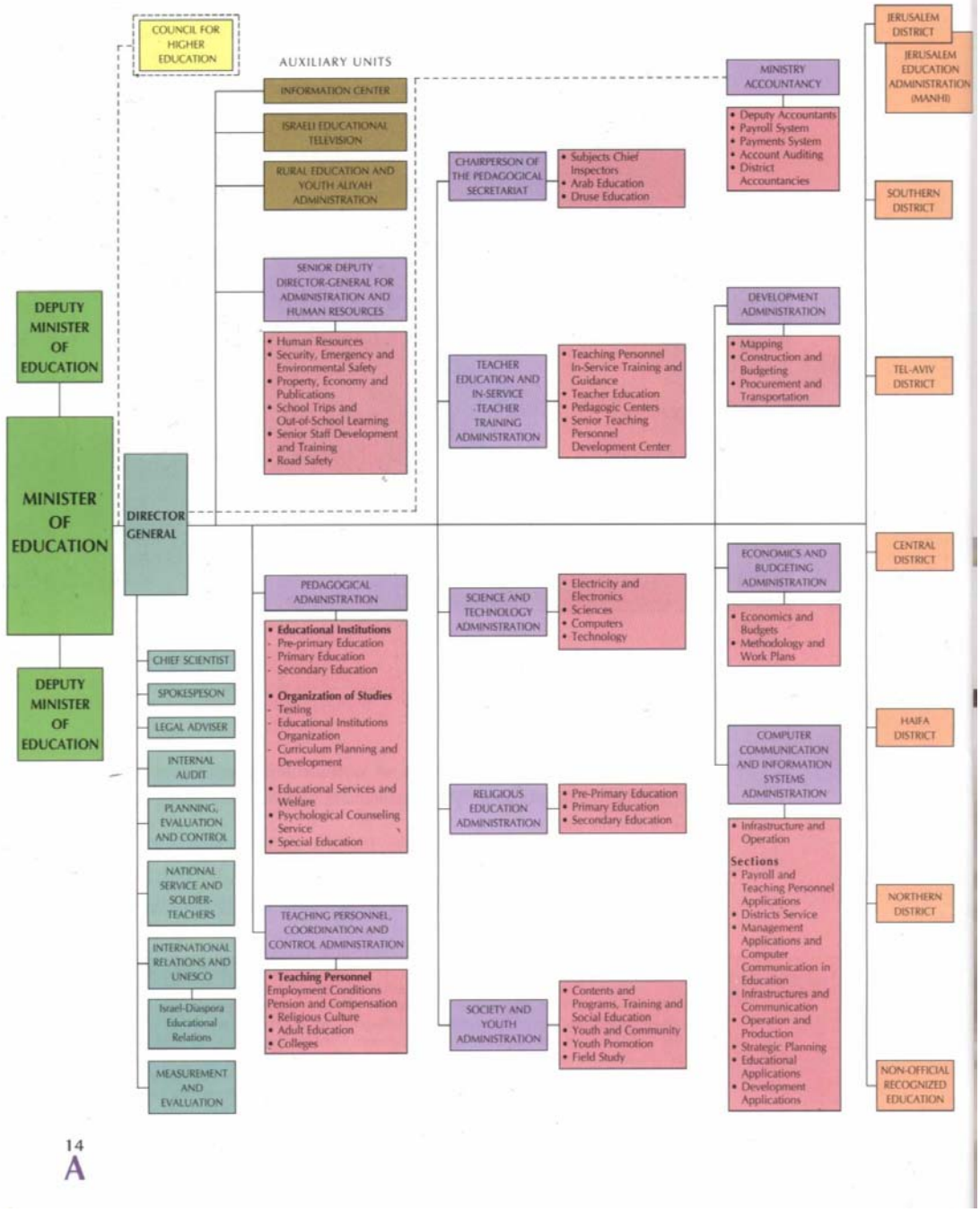


Exhibit 2: Structure of the Post-secondary and Higher Education System 1999-2000



ADMINISTRATIVE STRUCTURE OF THE MINISTRY OF EDUCATION

(Status - June 2001)



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