# The Price of Success: Some Consequences of Increased Access to Higher Education in Israel 

## LA RANCON DU SUCCES: QUELQUES CONSEQUENCES DE L'ACCES A L'ENSEIGNEMENT SUPERIEUR EN ISRAEL

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#### Abstract

Access to higher education in general, and to a bachelor's degree in particular, constitutes a major issue on the agendas of higher education systems in recent years. The end of WWII marked the global transition to higher education institutions of a democratic, open nature, and in most western countries, including Israel, the accelerated pace of this transformation in the twentieth century led to the massification of the bachelor's degree. In the final quarter of the twentieth century, Israel's Planning and Budgeting Committee conceived of the system of higher education as consisting of two levels: universities, with a focus on research and graduate studies, and colleges with a focus on undergraduate studies, which would serve as instruments of equality and social justice for students from the periphery through access to higher education. However, increased access affected both the new colleges and the longstanding universities, which competed among themselves, and gradually obliterated the differences between them. In this paper we discuss two specific aspects of this transformation and their implications: whether the Israeli Council of Higher Education's major goal of increased access has been achieved and the effects of increased access to bachelor's degree programs on the expansion of master's degree programs.


Key words: Higher education; Bachelor's degree; Massification; Equality; Justice; Periphery

## Résumé

L'accès à l'enseignement supérieur en général, et à un diplôme de baccalauréat, en particulier, constitue un enjeu
majeur dans les agendas des systèmes d'enseignement supérieur ces dernières années. La fin de la Seconde Guerre mondiale a marqué la transition mondiale vers les établissements d'enseignement supérieur d'une société démocratique, la nature ouverte, et dans la plupart des pays occidentaux, y compris Israël, l'accélération du rythme de cette transformation dans le XXe siècle a conduit à la massification du diplôme de baccalauréat. Dans le dernier quart du XXe siècle, de la planification d'Israël et du Comité du budget a conçu le système d'enseignement supérieur comme étant composée de deux niveaux: les universités, avec un accent sur la recherche et aux études supérieures, et les collèges avec un accent sur les études de premier cycle, qui serviraient comme des instruments de l'égalité et la justice sociale pour les étudiants de la périphérie à travers l'accès à l'enseignement supérieur. Toutefois, l'accès accru affecté à la fois les nouveaux collèges et les universités de longue date, qui se disputent entre eux, et peu à peu effacé les différences entre eux. Dans cet article, nous discutons de deux aspects particuliers de cette transformation et de leurs implications: si le Conseil israélien de l'objectif majeur de l'enseignement supérieur de l'accès accru a été réalisé et les effets d'un accès accru aux programmes de baccalauréat sur l'expansion des programmes de maîtrise.
Mots clés: L'enseignement supérieur; Baccalauréat; La massification; L'égalité; La justice; à la périphérie

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## INTRODUCTION

Access to higher education in general, and to a bachelor's
degree in particular, constitutes a major issue on the agendas of higher education systems in recent years (GuriRozenblit, 2000). Since the establishment of the world's first university in the eleventh century, universities have traditionally functioned as ivory towers, permitting entry to a chosen few. Over centuries, universities retained their elitist status and helped perpetuate social inequalities.

After 900 years, this situation, where elite has hegemony over higher education, came to end. The end of WWII marked the transition of higher education institutions to a democratic, open nature. In most western countries, the accelerated pace of this transformation in the twentieth century led to the massification of the bachelor's degree. In less than 50 years, the number of individuals holding such a degree tripled.

In the 1950s, undergraduate students accounted for a mere $3 \%-5 \%$ of their relevant age group in Europe; by the end of the century, these figures ranged from $36 \%$ to $53 \%$. Today, in most European countries, over $60 \%$ of the relevant age group is undergraduate students in academic institutions (Lindberg, 2007). A similar trend affected the United States, where almost $65 \%$ of the relevant age group is students in higher education. Statistics from Canada and Australia show a similar pattern where the rate of undergraduate students has crossed the $50 \%$ mark (Finnie \& Usher, 2007).

This global trend has also affected Israel, which has also joined the international higher education revolution: The foundations of Israeli higher education were laid in the 1920s, with the establishment of the Technion (1924) and the HebrewUniversity (1925). When the State of Israel was founded these were the only two local schools of higher education. The population increase and socioeconomic developments created a demand for higher education, and consequently in the 1950s and 1960s five universities were established: The Weizmann Institute, as well as the Tel Aviv, Bar Ilan, Haifa, and Ben Gurion Universities. In the 1970s Israel's academic system continued to branch out and develop. The Open University was founded and expanded its activities throughout Israel, and teacher training underwent a process of academization.

In the 1990s the Higher Education Law was enacted and amended (Council for Higher Education Law, amendment no.10) and subsequently many types of colleges were opened. The law enhances the quality of college awarded academic degrees, asserting their equivalence with university degrees. Originally, the PBC (Planning and Budgeting Committee) (1997) conceived of the system of higher education as consisting of two levels: universities, with a focus on research and graduate studies, and colleges, with a focus on undergraduate studies, which would serve as instruments of equality and social justice for students from the periphery through access to higher education.

The dialogue between universities and colleges on the issue of "role division" shows that the upheaval experienced by colleges had an effect on universities as well. In practice, both universities and colleges retained the goals of research, teaching, and community service. Contents of study in both types of institutions are determined by current demand more strongly than ever, which created changes and invigorated the system. Universities contributed to the training of an academic leadership, created faculty reserves that are utilized by colleges, and led the transformation of curricula and academic teaching methods (Kaveh, 2000). Universities are continuing to energetically pursue undergraduate students, and are expanding accessible programs accordingly. Regional colleges underwent organizational processes as well and some embraced national and international academic standards. In some colleges, research achievements are considered a crucial consideration affecting academic appointments, although the heavy teaching load does not leave time for research, and research is accorded extremely limited facilities and resources. Within two decades, the number of students enrolled in higher education increased several folds, from $5 \%$ of their relevant age group in the early 1990s to $53 \%$ in 2009 (Central Bureau of Statistics, 2009): All academic institutions have effectively opened their gates and become heavily populated, diminishing the special aura of higher education, which currently serves more as a means of social climbing and professional advancement than as its traditional role as an ivory tower than for research and scientific promotion (Soen, 1999).

In this paper we discuss two specific aspects of this transformation and their implications: whether the Council of Higher Education's major goal of increased access has been achieved, and the effects of increased access to bachelor's degree programs on the expansion of master's degree programs.

## 1. INCREASED ACCESSIBILITY IN BACHELOR DEGREE

In response to social changes in the final quarter of the twentieth century, including a huge influx of new immigrants from FSU countries in the 1990s, leaders of Israeli higher education set out to create a dual system, with a division of labor between universities engaged in research and colleges engaged in academic teaching and professional degrees. Although policy makers reasoned that the division between the university's two roles of theory and practice could perhaps be manifested in the division of roles between universities and colleges as well, the differentiation between universities and colleges has, instead, diminished over time, with more and more students seeking to complete their undergraduate studies at colleges, with their practice-oriented academic
programs. Universities are not ignorant of the need for vocationalization and high-quality vocational study programs, such as nursing and speech therapy, are being promoted there as well. Subjects that were once theoretical, such as mathematics, chemistry, and physics - seem to have adopted a more "practical" nature, serving as basic courses for essentially practical subjects, such as engineering, architecture, and physiotherapy.

Today, society has developed expectations of institutions of higher education and academic faculty: expectations of involvement in society's predicaments and relevant studies and research, expectations of a system that seeks to satisfy national needs, expectations of professional training to help the country advance and provide necessary professional, technological, and intellectual foundations for action promoting efficiency, economy, and administrative modernism. Israeli universities and colleges have both accepted this mission, which advocates "knowledge for practical purposes," albeit to varying degrees.

The conflict between universities, with their inclination to the abstract, and society, which searches for solutions to its urgent problems, gradually subsided as universities began using their resources to respond to social needs. Currently, Israeli universities engage in all domains simultaneously. They offer a popular higher education, including professional training in "semi-professional" fields, and they also serve as centers of scholarship and research in all academic fields.

Universities and colleges currently serve a population of students with different and varied educational and occupational plans, including some who are researchinclined, some with well-defined professional aims, and some seeking a general education. A major difference between the institutions is in the relative attention devoted
to science and to vocational aspects. The character of each institution is defined by these proportions.

One direct outcome of the national policy decision to increase access to higher education is an enormous proliferation of institutions of higher education that are certified to award academic degrees. Today there are 8 universities and 34 colleges ( 21 publically funded and 13 private colleges) and 24 teachers' colleges in operation in Israel.

Statistical data indicate that with the rise in the number of institutions of higher education, the number of Israeli students rose as well, from 135,900 in 1996/7 to 220,470 in $2007 / 8$, a rise of $62.22 \%$. There has also been a corresponding rise in the number of graduates, from 22,418 in 1994/5 to 55,284 in 2008/9, a steep increase of 146.6\%.

CBS data (Table 1) shows that most undergraduate students, even those studying at universities, wish to acquire a profession rather than focus on research. Only about one third of university students opt for the humanities, natural sciences, and mathematics (14.1\% at colleges in 2008/9). The number of undergraduate university students in the humanities has diminished nominally from a high of 20,000 in year 2000 to a low of 14,500 in 2009. In business administration and engineering, which are practical subjects, universities have experienced a rise over the past decade. In contrast, colleges have been gradually increasing their students of the humanities, from 1900 in 1995 to 6900 in 2009. In natural sciences and mathematics as well, the number of college students has grown from none in 1995 to 5000 in 2009. This is the paradox inherent in indistinct boundaries between universities and colleges in Israel. Nonetheless the policy of increased access has achieved enormous success in many areas, some of which are reviewed below.

Table 1
Undergraduate Students at Universities, Academic Colleges, and Colleges, by Field of Study

|  | At Universities |  |  |  |  | At Academic Colleges |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 1969-70 | 1979-80 | 1989-90 | 1999-2000 | 2008-9 | 1994-5 | 2008-9 |
| Humanities | 9,732 | 12,047 | 12,851 | 19,939 | 14,513 | 1,912 | 6,901 |
| Social sciences | 7,792 | 10,099 | 12,349 | 17,941 | 21,424 | 920 | 18,916 |
| Business and management | ---- | 1,476 | 1,265 | 1,822 | 2,375 | 3,745 | 16,341 |
| Law | 1,703 | 1,807 | 2,060 | 3,361 | 3,143 | 1,948 | 12,395 |
| Medicine and paramedical | 1,047 | 1,961 | 3,037 | 6,099 | 7,299 | ------- | 1,849 |
| Natural sciences and mathematics | 3,375 | 4,581 | 6,356 | 12,459 | 11,463 | --- | 5,075 |
| Agriculture | 395 | 1,125 | 738 | 762 | 795 | ------- | ------- |
| Engineering and architecture | 4,009 | 6,131 | 7,579 | 11,802 | 14,425 | 1,750 | 16,049 |
| Education and teacher training | --- | ------- | - | ------- | -- | 16,726 | 24,363 |

Source: CBS

If we study students' integration in the job market, statistics show that although students' qualifications are lower in colleges than in universities, the proportion
of students employed before and during their studies is higher in colleges ( $25.8 \%$ at publicly funded colleges and $27.9 \%$ at non-publicly funded colleges) than among
university students (22.2\%). University graduates benefit eventually by enjoying a high rate of assignment to roles requiring academic degrees ( $48.8 \%$ at universities versus $43.3 \%$ at publicly funded colleges and $35.8 \%$ at nonpublicly funded colleges). Surprisingly, the proportion of graduates of publicly funded colleges who received improved pay or were promoted is higher than among graduates of universities or non-publicly funded colleges.

Findings from a survey of 2005/6 graduates conducted in 2008 shows that the percentage of college graduates gainfully employed $(91.8 \%$ of graduates of publicly funded colleges and $92.1 \%$ of non-publicly funded) was higher than among university graduates (85.2\%). The disparate proportions can be attributed to the higher proportion of university students who continue to graduate studies(see Table 3).

Table 2
Undergraduate Students by School District (1989/9 - 2007/8)

|  | $1989 / 90$ | $1994 / 5$ | $1999 / 2000$ | $2004 / 5$ | $2006 / 7$ | $2007 / 8$ |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: |
| Total - absolute number | 55,250 | 86,320 | 126,900 | 155,900 | 163,530 | 168,000 |
| Total - percentage | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| Jerusalem | 22.7 | 17.5 | 15.5 | 13.0 | 13.1 | 13.2 |
| North | ------ | 2.5 | 5.3 | 7.4 | 8.2 | 8.5 |
| Haifa | 21.7 | 22.0 | 17.9 | 16.4 | 15.4 | 15.2 |
| Center | 4.1 | 4.3 | 15.9 | 16.2 | 16.9 | 17.2 |
| Tel Aviv | 42.8 | 42.7 | 31.5 | 31.9 | 31.5 | 30.7 |
| South | 8.7 | 10.9 | 13.9 | 15.0 | 15.0 | 15.2 |

Table 3
Integration of University and Academic College Graduates in the Job Market (2006/7)

|  | Total | Universities | Colleges Funded by the PBS | Non-publicly Funded Colleges |
| :---: | :---: | :---: | :---: | :---: |
| Occupation When Survey was Administered |  |  |  |  |
| Employed | 87.7 | 85.2 | 91.8 | 92.1 |
| Studying for higher degree or diploma, not employed | 4.9 | 7.1 | 2.1 | 0.8 |
| Compulsory or professional military service | 2.23 | 2.8 | 1.3 | ---------- |
| Others | 5.1 | 4.8 | 4.7 | 6.99 |
| Commencement of Current Job (\% of All Employed Graduates) |  |  |  |  |
| Before undergraduate studies | 11.3 | 8.8 | 14.6 | 15.6 |
| During undergraduate studies | 12.7 | 13.4 | 11.2 | 12.3 |
| After completing undergraduate studies | 76.0 | 77.8 | 74.2 | 72.1 |
| Improved Employment Conditions Following Accreditation (\% of All Graduates Who Began Working at Their Current Job before Completion of Undergraduate Studies) |  |  |  |  |
| Improved pay | 53.1 | 54.2 | 57.5 | 45.3 |
| Promotion | 35.1 | 34.8 | 39.6 | 29.2 |
| Assigned position requiring academic degree | 45.0 | 48.8 | 43.3 | 35.8 |

As far as education-job match, the survey cited above found that a higher proportion of college graduates reported a high match between their academic studies and jobs: $65.6 \%$ from publicly funded colleges and $67.4 \%$ from non-publicly funded colleges, versus $60.9 \%$ of university graduates.

In regard to geographical distribution between peripheral and central regions, the policy of increasing accessibility of academic studies to undergraduate students has proved successful. From 1989/90 to 2007/8 there was a rise in the proportion of students in the periphery versus the region comprising the three largest cities, from
$12.8 \%$ to $41.9 \%$ (see Table 2). However the qualitative disparity between periphery and center remained constant, since degrees earned at new schools that emerged in the periphery during this period are colleges which still are considered of a lower standard than university degrees. Statistics however show (Table 4) that the average psychometric scores (one of the admission requirements for universities, and one that is frequently waived by college admission boards in Israel) of first year university students of the humanities is lower than that of students
at publicly funded academic colleges: 523 versus 552, respectively. The fact that more than one-half of all undergraduate students study at colleges has increased the number of second-rate academic degrees in Israel. As many employers still give preference to university versus college graduates, students from the periphery and disadvantaged populations are those most negatively affected, although the stigma of colleges as second-rate universities is gradually diminishing.

Table 4
First-year Undergraduate Students Who Took the Psychometric Exam, by Type of Institution and Field of Study

|  | Percentage of Examinees |  | Average Score |  |
| :---: | :---: | :---: | :---: | :---: |
|  | 1998/9 | 2008/9 | 1998/9 | 2008/9 |
| Total for universities | 93.6 | 90.2 | 596 | 617 |
| General humanities | 87.6 | 70.3 | 521 | 523 |
| Languages, literature, and regional studies | 88.6 | 85.8 | 525 | 572 |
| Education and teacher training | 88.5 | 94.6 | 514 | 569 |
| Arts and applied arts | 91.8 | 83.2 | 574 | 592 |
| Social sciences | 93.9 | 87.1 | 587 | 587 |
| Business and management | 97.6 | 97.5 | 647 | 629 |
| Law | 97.6 | 96.9 | 676 | 688 |
| Medicine | 92.9 | 99.5 | 519 | 735 |
| Paramedical professions | 98.1 | 96.1 | 585 | 610 |
| Mathematics, statistics, and computer sciences | 94.8 | 94.2 | 657 | 660 |
| Physical science | 97.4 | 93.3 | 630 | 655 |
| Biological sciences | 93.5 | 98.0 | 633 | 647 |
| Agriculture | 96.9 | 96.3 | 598 | 642 |
| Engineering and architecture | 98.5 | 98.8 | 654 | 668 |
| Total for publicly funded academic colleges | 79.9 | 70.8 | 562 | 552 |
| Total for non-publicly funded academic colleges | 85.4 | 58.5 | 567 | 545 |
| Total for academic colleges for education | 60.7 | 87.5 | 481 | 509 |

Source: CBS

The two main admission criteria in the higher education system in Israel are matriculation average, and psychometric score. Despite efforts by the Ministry of Education to improve matriculation pass rates (Flexer, 2001), the rate of individuals eligible for matriculation certificates in proportion to the total number of individuals who sat for the exams has been in constant decline, from $68.12 \%$ in $2002 / 3$ to $62.31 \%$ in $2007 / 8$. While many high school students work toward a matriculation certificate in high school, taking a psychometric test is not part of ordinary high school curricula. Sometimes the high cost of a preparatory course prevents young people from low socio-economic strata from achieving a high score, and many higher education applicants simply do not have a psychometric score to declare in their applications.

In the decade from 1998/9 to 2008/9 a drop in the rate of undergraduate first-year students at universities and
colleges whose admissions were based on a psychometric score (among other criteria), with the exception of teacher colleges, where it rose (Table 4). At non-publicly funded academic colleges the drop was drastic, from $85.4 \%$ to $58.5 \%$. Significantly, several academic colleges require a different entry screening test instead of the psychometric exam (one example is the Shamoon College of Engineering and the Jerusalem College of Technology). Most colleges define admission criteria for their programs in terms of aggregate scores, which are an average of matriculation and psychometric scores (one example is the Ariel University Center). Therefore it is important to analyze average psychometric scores, which rose at universities and teacher colleges during this decade while dropping at other academic colleges. The most drastic drop was noted at non-publicly funded colleges. Due to the different admission criteria in universities and
colleges, the average psychometric scores of students at both types of institutions differ significantly. For example, the average psychometric score of law students in university programs was 687 , compared to 543 in college law programs.

According to recently published data (see Table 5), the programs in highest demand at Israel's universities are architecture, medicine and dentistry. In these fields the ratio of applicants to students is the highest. In contrast, almost all applicants to the general BA program and other programs in the humanities are accepted. In academic colleges, architecture and urban design are also in extremely high demand, as are the programs in fashion design and visual media. In contrast, in programs such as banking, logistics, construction engineering, and insurance, there are 1.2 applicants for every spot. The country's law programs are divided into publically funded programs offered by universities, and unfunded programs offered by colleges. Only one-half of the 1,500 applicants to university law programs were accepted, in contrast to two-thirds of the 5,000 applicants to college law programs who were accepted.

Table 5
University Candidate/Student "Ratio" by Field of Study for 2007/8

| Field | Candidate/Student Ratio |
| :--- | :---: |
| Medicine | 3 |
| Law | 2.7 |
| Paramedical professions | 2.3 |
| Business and management studies | 2.2 |
| Engineering and architecture | 1.9 |
| Natural sciences and mathematics | 1.7 |
| Social sciences | 1.7 |
| Education and teacher training | 1.6 |
| Physical science | 1.4 |
| The humanities | 1.4 |
| Total | 1.8 |

Source: Central Bureau of Statistics
Despite the achievements of increased access, the most important achievement of democratization and authentic equal opportunities has yet to be achieved. What is missing is a conception of higher education that outlines the future course of development of these converging types of academic institutions - colleges and universities. Otherwise, it is inevitable that academic institutions will eventually find themselves competing with each other for quality and resources. The higher education discourse in Israel is today an ambivalent system that must reach decisions on essential issues such as: How disparate will be the designations of various colleges? Will the propensity of central Israel to take the lead be manifested
in a division of roles between academic colleges? Does an academic college have a chance of leading in the field of research?

One of the implications of this competition between institutions has led to decreasing admission requirements for graduate degrees and erosion in their value.

## 2. INCREASED ACCESS REACHES GRADUATE DEGREES

In view of these data, it is certainly possible to state that undergraduate studies constitute "a degree for the masses." The higher education system has become accessible to the masses, and the majority of the students who wish to acquire an undergraduate degree will find an institution that provides the means for them to do so. However, as the trend of massification increases in intensity, we are beginning to see how massification is cascading to more advanced degrees as well. Statistics indicate that a master's degree has long since stopped to constitute an intermediate degree on the route to an academic career (Central Bureau of Statistics, 2009). According to Israel's Council of Higher Education data, 41,740 students studied toward a graduate degree in 2007. For the sake of comparison, the number of graduate degree students in the early 1990s was a mere 17,000 (Planning and Budget Committee, 2009). As these statistics attest, access to higher education has extended to advanced degrees. This new reality can be expected to have enormous implications for the future of academic research.

In the last 10 years, graduate programs have undergone several changes that effectively permitted the growth in the number of their students. Israel's academic colleges were awarded a permit to award graduate degrees. Moreover, non-thesis graduate programs were opened, both in colleges and in universities. These institutional changes were accompanied by a diversification in program offerings, increased flexibility in class schedules, accelerated tracks, and private (non-governmentfunded) tracks. All these contributed to the growing number of students in graduate programs, which offered unprecedented access to the Israeli public - a broad range of admission criteria, institutions, programs, and duration of studies. This trend raises several pertinent questions, including whether quantity has come at the expense of quality; what are the implications of a graduate degree program in a non-thesis track, and what implications does the existence of such tracks have for the future of doctoral programs. We attempt to answer these and other related questions.

### 2.1 The History of the Graduate Degree

The concept of graduate studies was first introduced in Germany in the eighteenth century, when universities in Germany were established with the aim of allowing
students and faculty to engage in research. The Germans coined the term "Lehrfreiheit" (Commager, 1963), which means the academic and research freedom granted to university fellows, which allows them to research and publish any topic as they see fit (Brubacher \& Rudy, 1997). This concept, which was the ideological foundation of academic institutions, became popular in Germany and led to the establishment of laboratories and seminars focused on research. The Germans bestowed on the academe structural functions that had not previously existed - research and teaching. This idea, sown in the universities of Berlin, spread throughout Germany, and from there to the world at large.

In Germany, Lehrfreiheit was the foundation and basis for academic studies and therefore they created a nonmodular system of two circles: The first circle the students entered was a six-year study program, at the conclusion of which a graduate Master's degree was awarded. The second circle constituted the individual's doctoral studies. At the time, students were presumed to devote their entire time and energy to their studies, as they strive toward an academic career. The six-year program was constructed to allow students freedom in shaping their academic career (Stallman, 2002) and realize their creative ideas. This approach treated academic studies as a pursuit that demanded students' full attention, motivation, and efforts. Many American students were attracted to the German concept and a "brain drain" began to Germany: Approximately 10,000 students traveled to study in Germany from the early nineteenth century until the outbreak of WWI (Brubacher \& Rudy, 1997).

In those years, the United States had operated on the British model, which awarded baccalaureate degrees at the conclusion of three years of study. Honorary graduate degrees were awarded to holders of a baccalaureate degree who continued to study for an additional three years (ASHE Higher Education Report, 2005). Honorary doctorate degrees were also awarded.

In 1876, Johns Hopkins University was founded in the United States, symbolizing for many the beginning of graduate degree studies in the United States (Altbach, Berdahl, \& Gumport, 2005). The institution's founder designated the school for students whom he called "the best and the brightest," students who devoted all their time to research in a specific field, relinquishing all the trappings of contemporary campus life. At the conclusion of their studies, students were awarded a Ph.D. degree. The establishment of Johns Hopkins University constituted the foundation for graduate studies. In 1900, the American Association of Universities (AAU, whose founding members included Johns Hopkins, Harvard, and Yale), believed that a new graduate program was required. The new program included a new intermediate degree - a master's degree - on the path toward a doctorate degree. The doctorate degree became the supreme criterion in the
hierarchy of academic degrees, and the master's degree became a milestone in an academic research career. In 1909, the AAU defined the aim of master's degree studies to be a research degree whose goal is enrichment (ASHE Higher Education Report, 2005).

A revolution has occurred in the higher education system in the century that has since passed - higher education has become a mass product (Irma, 1983). This transformation commenced in bachelor's degrees after the end of WWII (Trow, 1973) and today this transformation is also affecting master's degrees, which have more recently become the object of increased access and expansion.

### 2.2 Factors Underlying the Massification of the Master's Degree

Master's degree programs have proliferated significantly beyond expectations. All over the world, the numbers of students in these programs has soared by tens and sometimes hundreds of percent in a period of 50 years. While the expansion of bachelor's degree studies can be explained in terms of changes in socio-political (Yogev, 1992), economic, or academic (Rothblatt, 1997) perceptions, the massification of advanced degrees largely is based on the capitalist aspects of education. The bachelor degree per se does not induce students to continue their studies (Smith, 2008), but rather the external factors that sometimes appear to force graduates to continue their studies. The Liberal Arts degree, common in Under-Graduate studies in the US is another reason for the large number of graduate students, who seek a profession in the master's degree, such as Law, Business, and Medicine.

## Credentialism

Credentialism was defined by Dore (1976) as an emphasis placed by students or employers. Not on "mastery, but with being certified as having mastered..." (p.8). The propensity to appreciate the significance of a certificate more than the skills themselves creates a kind of vicious circle in which increasingly advanced degrees are required in the attempt to compensate for the diminishing value of the certificate. Dore highlighted the manner in which this trend expanded through a story taken from contemporary employment experience:

A bus company may 'normally' require a junior secondary leaving certificate for $£ 5$-a-week bus conductors and a senior secondary leaving certificate for its $£ 7$-aweek clerks. But as the number of senior certificate leavers grows far larger than the number of clerkships that are available, some of them decided that $£ 5$-a-week as a bus conductor is better than nothing at all. The bus company gives them preference. Soon all of the available conductors slots are filled by senior certificate holders:
"a senior certificate has become a necessary qualification for the job". (p.5)
This process is occurring especially due to employers' belief that education "improves" employees and that they are getting more for their money when they hire an
individual with a degree more advanced than typically required. This belief led employers to demand a bachelor's and a master's degree of their employees. If employers can hire an individual with a graduate degree rather than a bachelor's degree, they will begin to demand candidates with a master's degree - employees who are more educated - for the same salary. When employers prefer employees who have degrees over employees who do not, this phenomenon is known as credentialism (Brown, 1992).

This is the state of affairs in Israel. The CBS published data indicating an excess supply of academic graduates (press release from October 22, 2008, based on a survey of 2000/1 and 2001/2 graduates two years after receiving their degrees): "The rate of over-qualified Israeli employees with bachelor's degrees had reached $37 \%$ two years after graduation... over the years there has been a disparity between the salaries of employees who are sufficiently qualified for their jobs and those who are over-qualified, in favor of the former."

## The Labor Market

Many jobs in the labor market define a bachelor's degree as a minimum requirement. In the absence of all other data on candidates, the degree provides employers with an estimate of the employee's potential or quality. Tyler (1982) argues that, according to human capital theory, employers who use credentialism as a screening tool consider it a kind of predictor variable of employee efficiency and productivity.

Brown (2001) explains this trend by arguing that in a bureaucratic world, credentialism provides information on an individual's ability to perform the tasks required by the bureaucracy. According to one explanation, credentialism's role in higher education is to allow distinctions between those who can and those who cannot, and to provide employers with a measure for employee screening and selection (Bills, 1998a). Holding an academic degree represents something else in the labor market, something more meaningful, such as knowledge, qualifications, and loyalty (Brown, 2001). According to this explanation, the market demands degrees, since they are considered critical for assessing an employee's qualifications, even if the degree is not required for the position. The fact that academic degrees have become an index of ability is explained by Bills (1988a) by the argument that academic degrees have become a type of an employment capital.

The problem with the phenomenon described above is exacerbated when the labor market is replete with unemployed degree-holders. For example, in the case of an MBA degree, which is the most prevalent of all master's degrees, an unemployed MBA holder will compromise on a job that does not typically demand an advanced degree. The employer who understands that he can employ an individual who holds an advanced degree
for the same salary, will change the job requirements. In this situation, an MBA degree will become a requirement for much lower jobs for which an advanced degree was never previously required. In senior managerial positions, where an MBA degree was previously sufficient, a more advanced degree is now required. In this way, a feedback loop is created that inevitably affects the methods of instruction, learning, and funding in academic institutions.

This trend will only increase over time, eroding the quality of advanced degrees and ultimately, we believe, will adversely affect the academe's holiest of holies academic research.

## The Economic Gains

One of the major identifiable factors underlying the expansion of academic degrees is their perceived financial benefit. Wonacott (2000) claims that "a bachelor's degree is widely considered the universal ticket to a desirable, high-paying career and comfortable middle-class life" (p.1).

If this is how a bachelor's degree is perceived, a fortiori is the case with regard to a master's degree, which is also expected to generate future gains. While employers use degrees to create a division of positions, employees view advanced degrees as a means to increase their personal gains. Indeed, studies support this view, which views the acquisition of education as a means of attaining economic security and defense against poverty (More Education, 1998). From the perspective of potential employees, the more advanced a degree they hold, the greater the chances of their ability to earn more money. This position, which also expresses reality in practice, is the ultimate incentive underlying the massification of advanced degrees. The system, on its part, increases access by creating a broader range of programs and exemptions that make the route to an advanced degree simpler and quicker. Below we discuss one of the key changes in master's degree programs.

### 2.3 The Master's Degree in Israel

The higher education system in Israel established its foundations with the opening of the Technion (1924) and the Hebrew University of Jerusalem (1925). The Technion and the Hebrew University were largely shaped in the spirit of Germany's universities and technological institutions, which, up to the 1920s, had fused the ideas and ideals of the Humboldtian University with the spirit of Ehad Ha'am (Iram, 1978). The vast majority of teachers at the Hebrew University and the Technion had been trained in German universities or higher institutions of technology in Central and Eastern Europe, and the curricula at both institutions was structured on the model of European university institutions. This model, as noted, was based on a dual system that exclusively offers graduate and doctoral degree tracks.

In the late 1940s, the Hebrew University adopted the conclusions of the Harvard Committee Report on "General education in a free society" (Iram, 1978) and moved to a
three-level model that also conferred bachelor's degrees The universities that were subsequently established followed the Hebrew University and similarly adopted the Anglo-Saxon three-level degree model.

In the middle of the twentieth century, as part of the changing academic environment, theoretical master's degrees programs were established in the United States. Establishing a theoretical graduate program constitutes a direct response to the demands of students and the labor market. The original idea was to enable graduate studies in professional degrees (Drennan \& Clarke, 2009) through programs designed to enrich professional knowledge rather than to provide a foundation for a career in research.

The US concept spread globally. Australia (Forsythe, Pizzica, Laxton \& Mahony, 2009) and Canada (McInnis, James \& Morris, 1995) also adopted diversity in graduate programs in general, and the theoretical graduate program in particular. Results were almost immediate an enormous rise in the number of enrollees in graduates programs (James \& Beattie, 1996). Europe also joined this trend and many countries offer master's degree programs that require no research thesis. These programs, which are known as "professional studies" (in contradistinction to "research studies"), typically last 12 months but may extend over two years of study (Haug \& Tauch, 2001).

In Israel, until the 1990s, a master's degree was a research degree, and the study program included work on a thesis that typically extended over a two-year period. Universities in Israel (with the exception of the Open University) were the only institutions certified by the CHE to confer a master's degree. In the interim between the establishment of the state in 1948 and the 1990s, the entire higher education system remained a small, elitist system. In the 1990s, higher education for a bachelor's degree began to expand, and this trend also affected advanced degrees, albeit at a slower pace: Approximately $39 \%$ of all graduates with a bachelor's degree continue to an advanced degree program.

The growth in the number of students in master's degree programs occurred concurrently with the creation of new master's programs, which seemingly sprang up out of the blue, to adapt to the new reality of the growing demand for advanced degrees. Expedited programs and programs that require no research work were established in an attempt to attract students and match the demand.

The dramatic increase in numbers reflects the changes that occurred on the policy level several years earlier. These changes triggered the massification in advanced degrees which previously constituted an interim step on route to research. First, the CHE permitted non-university institutions to award master's degrees. It was the College of Administration that paved the way for others, when it first awarded a master's degree in business administration (MBA) in 1999. This milestone symbolized a conceptual turning point and a descent from the academic ivory
tower. Certification to award master's degrees was subsequently extended to many other colleges. If, in the past, six institutions were certified to award a master's degree, ten years later, in 2009 there are 35 institutions in Israel that offer a master's degree program. The ability of colleges to award advanced degrees has expropriated the universities' monopoly status, and significantly increased access to a master's degree with thesis in some colleges.

The decision to open a theoretical master's degree program (with no research thesis) in the country's colleges created a genuine revolution in access to advanced degrees. The change was so profound that $68 \%$ of all the individuals awarded a master's degree in 2009 were students of non-thesis programs. For the sake of comparison, only $27 \%$ of all individuals awarded a master's degree in the early 1990s were students of a nonthesis program (Knesset Report, 2006).

The addition of non-thesis master's degree programs eroded the status of Israel's universities, which also experienced a significant budget cut of NIS 1.2 billion at the time. The system's budget buckled under the concurrent dramatic increase in the number of students in undergraduate programs. The universities had no choice but to join the new trend and open theoretical programs in order to attract students, and indirectly, to support their continued existence. Most of the growth in the number of students in non-research programs occurred in business administration and law, two fields considered "professional fields." In business administration and law, the share of students entitled to non-thesis degrees soared to $95 \%$ and $97 \%$, respectively. In the natural sciences and in mathematics, in contrast, $92 \%$ of all the students awarded a master's degree in 2003 completed their studies in a research-track program.

It seemed that the addition of theoretical tracks to graduate programs through the entire system into a spin: By eliminating one of the most difficult hurdles of a master's degree - the research thesis - the system created enormous accessibility. A review of the statistics over time indicates that the number of students in research programs has remained more or less stable, but the number of students in non-thesis programs has skyrocketed.

A recently published study by Yogev (2010) compared executive master's programs and ordinary master's programs offered by various departments and faculties in a single academic institution (Tel Aviv University). The executive master's programs were scored in the following manner: 1 - complete similarity to the ordinary program; 0.5 - partial similarity; $0-$ no similarity. The programs were scored on 10 different categories: prerequisites, supplemental courses, final exam or project, number of mandatory courses, number of electives, structure of mandatory courses, number of seminars, number of instructors, choice of seminars, and the ratio of adjunct faculty to the department's regular faculty. The resulting index, ranging from 0 to 10 , reflects the similarity of
the executive and ordinary programs. Findings show that in only one field (Public Policy) the executive and ordinary programs reflected a strong similarity (7.5). Executive and ordinary programs in the remaining fields (Security and diplomacy, political communications, labor studies, philosophy and digital culture, and education and computers) were shown to be significantly different.

In addition to the above scores, interviews were conducted with 18 instructors who taught concurrently in both types of programs. The instructors were ambivalent: While they complained of students' poor standards, they also argued that it was easier to teach executives because of the latters' enthusiasm and the interesting discussions that emerged in the classroom.

The researcher concluded that notwithstanding the contribution of advanced education for executives in the labor market, these programs pose problems, and not only from an academic perspective. Yogev (2010) argues that universities are employing a double standard toward these executive programs, because they treat them as close equals to ordinary master's degree programs. By writing a thesis, the graduates of executive programs can continue to doctorate studies, despite the significant difference between these graduates and the graduates of ordinary programs. The researcher states that this matter might, in the long run, erode academic standards and harm the status of doctorate studies. Since the universities have a financial need for executive programs and therefore cannot waive this option, they should create identity between the two types of programs by setting similar requirements and academic standards in both.

It seems that the massification of degrees has also penetrated advanced degree programs. Significant changes have occurred in master's degree programs. These changes are manifest in the growing number and diversity of educational institutions that offer such degrees, the growing number of students in Israel's higher education system, the diversity of fields that offer master's degree programs, the addition of theoretical programs, and the changing demographic composition of students in institutions of higher education. These changes forces us to ask new questions, such as how these changes affect various aspects of today's master's degree, what is the profile of today's master's degree holder, what is the standard of these programs, and are there differences between the graduates of theoretical and research-oriented master's degree programs.

In Israel the transition of college graduates to university master's program, is sometimes problematic, as in most disciplines there are no acceptable national master's entrance tests (such as GRE in the US), which may serve also as entrance test for master's graduates (as done in some US universities) . Ethical problems in exams and projects in all types of institutions, distort the reliability of the grades. These problems can be resolved by such national exams for post graduate studies. Such
entrance exams exist in Israel only for MBA (the GRE), and Psychology (Mitam, an Israeli national test for psychology). In rare cases the ranking of the student in his class is considered. In Israeli universities, sometimes college graduates are asked to repeat some courses from their undergraduate degree when they wish to enter the master's studies in a university. This discriminative phenomenon, although illegal, was one of the reasons for the pressure to open master's programs in the colleges, which eventually extended the competition between the universities and the colleges to the master's degree too. Since most university graduates, who continue to the master's degree, continue in the same university, the universities do not consider the problem of transferring from one institution to another as crucial (the exception of MBA and psychology was mentioned above). In order to encourage their own excellent undergraduate students to pursue graduate studies, they encourage them to combine the first and second degree in one year less. Excellent students in the master's level are, often, encouraged combining the second and the third degree, where the master and the doctorate thesis are combined.

The Council of Higher Education of Israel allocates higher budgets to the universities, per student and per faculty member, for teaching, and for research, as reflected in the annual budget, and allocation model. The colleges which were supposed to bring equal opportunity to the underprivileged may become the symbol of inequality.

## 3. SUMMARY

Differentiation between two classes of higher education institutions - universities vs. colleges - is becoming practically vague in Israel. Most institutions share the same goals - and face the same challenges. The concentration of the colleges on teaching quality raised the awareness of the universities to the importance of teaching. Every university conducts teaching workshops for teachers, during the past 10 years.

Although competition has promoted welcome transformations and generated significant benefits, it is time today for all institutions to focus the competition on excellence and not by type of institution, by giving students and researchers in both types of institutions equal chance to excel and to compete equally on research grants, and fellowships. Sharing infrastructure budgeted by public sources is inevitable, in a geographically small country as Israel. Researchers from colleges should be allowed to share such research infrastructures with the universities, as most of them received their doctorate from the universities. This will prevent brains drainage - one of the main threats of the Israeli society today.

Free transition of graduates between institutions, and securing the quality of the advanced degrees requires to institute national entrance tests for all post graduate studies, for graduates of all types of institutions equally.

As we have shown here, accessibility to higher education was achieved in the bachelor and master degrees. However, equality was not fully achieved. We have paid a heavy price for increased access, and now our mission is to concentrate on new challenges.

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