

**EDUCATION**

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## **Introduction**

In the context of establishing a new multi-year program of State investment (Horizon 2006-2009), *Consultation and Research Institute (CRI)* has been assigned to analyze the sectors of education and health. This report examines the education sector, particularly the following sub-sectors – as defined in the terms of reference:

- Sub-sector 1: Child Care (from 0 to 2 years)<sup>1</sup>
- Sub-sector 2: General Education
  - Cycle 1: Kindergarten (from 3 years to 5 years)
  - Cycle 2: Primary (from 6 years to 11 years)
  - Cycle 3: Intermediate (from 12 years to 14 years)
  - Cycle 4: Secondary (from 15 years to 17 years)
- Sub-sector 3: Vocational and Technical Education
- Sub-sector 4: Higher Education

The objective of this report is to bring out the elements of a vision for the education sector, based on a situational analysis on one hand and on the macro-economic constraints that Lebanon currently faces (taken into account the impact of the public debt on public expenditures and investments) on the other. This study includes not only an analytic reading of available statistics, but also a review of main public and official documents published on the subject. Setting up this particular strategy should allow, in a subsequent phase, the establishment of a series of performance criteria and indicators aimed at optimizing and rationalizing public investment. These criteria will, in turn, allow the prioritization of the different public investment projects.

This report is part of a comprehensive framework, which includes the different sectors of investment as defined by the CDR<sup>2</sup>. Other similar studies are being undertaken, covering the sectors in question. These studies also seek to establish the key sectoral strategies. The consolidation of the latter should allow presenting the “Development Vision” for Lebanon in the 10-15 year horizon.

It is also important to note that this document principally is addressed to the following entities:

- i. *The various administrations* in order to present a clear and reasonable list of the public services, equipment and school supplies in the 10 to 15 year horizon. In fact, this document presents the strategic choices concerning each of the sectors in question, which allows the different administrations to define and develop their sectoral policies.
- ii. *The Lebanese Government* to submit a list of institutional choices.
- iii. *The International Financial Administrations* in order to present a coherent vision of Lebanon’s politics of equipment.

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<sup>1</sup> These age groups are based on completed years.

<sup>2</sup> These sectors, as defined by the CDR, include: Physical Infrastructure (electricity, post and telecommunication, and transportation), Social Infrastructure (education, health, social and economic development, land and environmental usage), Basic Services (water, waste treatment), Production sectors and other sectors (agriculture and irrigation, ports and airports, public buildings, management)

This report is composed of the following parts:

- i. In the first section, the report attempts to identify the fundamental education principles adopted by the government and included in official texts and documents that address this subject. This part shows the theoretical and effective limits of the government's involvement in the education sector, as defined by the different official signed agreements (Constitution, international treaties, etc).
- ii. In the second section, the report attempts to assess the current situation of the education sector, through a condensed analysis of available data on one end, and on the other through an analytic re-reading of the numerous documents that cover the subject.
- iii. The third part of the report offers a series of guidance and strategic options for the education sector.

Finally, it should be noted that this report has been based on two major sources of information:

- i. First, the literature review of merely all available and pertinent documents, studies, statistics and reports pertaining to Education
- ii. And second, a considerable number of meetings and brainstorming with major sector's stakeholders.

It is important to note that the available information (statistical or other) is limited. In spite of the fact that statistical data pertaining to the education sector is one of the best compared to other sectors, it nevertheless remains insufficient. This constitutes an important constraint to conduct a comprehensive and exhaustive analysis. Therefore, it is crucial to create consolidated statistical database collected from different sources (Educational Research and Development Center-CRDP, CDR, Ministry of Education, private sector, etc.).

## **1. THE FUNDAMENTAL PRINCIPLES GOVERNING EDUCATION IN LEBANON**

It is important, to identify the responsibilities of the State in the education sector. Thus, the key official documents determining the basic principles of public intervention in education are the following:

- The Lebanese Constitution and the Taef Accords
- The founding law of the Ministry of Education
- The Lebanese Legislation
- The jurisprudence, customs (habits), and historic heritages
- The international agreements and commitments resulting from the United Nations charters (charter of human rights, charter of rights of children, MDG, etc)
- International conferences, Arab and regional (e.g. Dakar-2000)

The consolidation of these different documents helps acquire a panorama of fundamental principles that tend to govern the Education sector. The brief analysis of these documents gives the following key principles:

### **1.1 PRINCIPLES REGARDING THE OBJECTIVES & STRATEGIC APPROACHES OF EDUCATION**

The basis of these principles as deduced from the available documents can be summarized as follows:

- i. Education, in essence, is a process to build the future and the main tool for building mankind.
- ii. Education is the main engine for progress in all realms of life, in order to achieve sustainable development and to build a Society of Knowledge.
- iii. Education should ensure the global development of the person, the respect of human rights and fundamental freedoms (openness and social cohesion), and reinforce the active participation of society.

### **1.2 PRINCIPLES REGARDING RIGHTS AND THE MEANS TO ACHIEVE THEM**

The main principles are the following:

- i. The right to education
- ii. The freedom of education
- iii. The equality of opportunities:
  - Guarantee to all citizens equal access to education
  - Guarantee, at the level of treatment, equity and equality
  - Guarantee equal opportunities of success

- iv. The close cooperation between the public and private systems, until reaching a partnership. Education in Lebanon is a dual system, where responsibilities are shared between the two sectors.

### 1.3 PRINCIPLES GOVERNING HIGHER EDUCATION

The principles can be summarized as follows:

- i. Acquire knowledge and skills
- ii. Adapt to the needs of society
- iii. Reinforce the link between higher education and the labor market
- iv. Diffuse specialized knowledge and develop it
- v. Form the executives and elites of society.

For the most part, these principles often recur in the official texts. A consensus over these principles is not hard to reach due to the broad nature of these texts. Thus, a conclusion imposes itself: the “duality” (between the public and private sectors) in Education is a recurrent principal. Therefore, it appears that the notion of “duality” is adopted as a major principle in the Education sector (see the principle 1.2.iv.). Should it be questioned? Is it applied in the strict sense of the term “duality”<sup>3</sup>? The situation analysis will provide some elements of response to these questions.

A thorough analysis of the current situation is deemed essential in order to better-understand the workings of the system, as well as identifying the existing divergences between the “theoretical” principles and the practice of the sector.

In light of these fundamental principles, and of results and analyses reached by numerous in-depth and recent studies on Education – conducted by public, international, and private institutions –, the report will attempt to address the latter’s situation and to extract the essential elements of its future “vision”.

#### Summary 1

1. *Broad principles full of good intentions.*
2. *These principles are rarely applied and are frequently in contradiction with reality.*
3. *Theoretically, the “duality” of the educational system appears as a major principle. However, is the Lebanese educational system really dual in practice?*

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<sup>3</sup> The duality is defined by complementary guidelines of a partnership between the two sectors (public and private).

## 2. CURRENT SITUATION

The current situation of the education sector in Lebanon is essentially characterized by the main following facts:

### 2.1 NO VALIDATED OFFICIAL VISION

There exist a great number of documents, reports and studies (official and non-official) that approach, through different angles, the multiple themes related to education. However, none has so far been officially approved or finalized by governmental authorities, in order to clearly define its strategic vision concerning the extent and limits of its future interventions and strategic approaches that are supposed to govern the sector (in terms of investments, functioning, maintenance, quantitative and qualitative mobilization of human resources, etc.). Often, these documents are under an “essay” or “strategic projects” format that rarely leave the drawers of the concerned ministries (or ministers), and thus are not discussed by greater public authorities – in this case the Council of Ministers. Yet, when in the presence of several “strategic projects” that depend on one or more of the public institutions incorporated with the ministry, it is evident that the country does not in reality follow a strategic vision. In order to fill this void, the report suggests simulating the main approaches of this strategic vision by evaluating the sector’s current situation and some punctual recommendations reached by the available studies and documents notably those produced by the CRDP and programs funded by international organizations (World Bank, European Union, UNDP).

However, the absence of a validated official vision for the education sector should not undermine the important efforts that have been carried out since the end of the civil war. In fact, different entities and institutions within the education sector have launched and achieved important development projects, of which are the following:

- “A Plan for Education Reform in Lebanon” (1994)
- New Educational Framework in Lebanon (1995)
- Decree of “General Education Curricula and their Goals” (1997)
- New Framework for Vocational and Technical Education (2000)
- Multiple studies and researches done by the CRDP, thus providing an interesting basis for the strategic analysis
- Free Compulsory Primary Education in Lebanon (Law # 686/98)
- Construction, reconstruction and rehabilitation of schools<sup>4</sup>

### Summary 2

*1. No official vision, despite important efforts made to develop this sector.*

<sup>4</sup> These interventions (principally the role of the CDR) will be detailed further in this report in a specific section

## 2.2 A DUAL SYSTEM OR ADJACENT SECTORS?

Education in Lebanon is articulated “theoretically” around a dualist system. Indeed, education is provided by the private sector (and “free-private” for the primary), as well as by the public sector. This dualist system is the direct consequence of a historic heritage where education was, at first, only provided by private schools (the majority of which were religious). It was in the course of the second half of the 19<sup>th</sup> century that public education appeared.

The articulation of the Lebanese educational system around the two sectors (private and public) is a necessary but not sufficient condition for describing the system as dual. Criteria such as the complementarity between the sectors and the establishment of a real partnership covering all the levels of the educational system are also prerequisites of this denomination. However, in reality, institutional bridges between the private and public sectors are rare, so are examples of cooperation and coordination between the two. Consequently, the denomination of the “adjacent sectors” is more exact than a “dual system”, since the two sectors (private and public) function independently from one another, making them adjacent, rather than coordinating and complementary, i.e. “dual”.

The Lebanese educational system accommodated, in 2003-2004, 918,611 students for general education, 132,645 for university studies and 99,878 for technical and vocational studies. Thus, about 1.150 million students were registered throughout the academic year 2003-2004, representing about 30% of the resident population of Lebanon. The table below shows, for each of the sub-sectors and cycles in question, the distribution of students between the public and private sectors.

**Table 1: Distribution of students by sub-sector and by cycle (2003-2004)<sup>5</sup>**

Level	Total Students	Share of Public Sector (%) <sup>6</sup>	Distribution of Students
Kindergarten	154,214	23.7%	13.4%
Primary	453,578	35.3%	39.4%
Intermediate	198,372	45.7%	17.2%
Secondary	112,447	54.1%	9.8%
<b>Total General Education</b>	<b>918,611</b>	<b>37.9%</b>	<b>79.8%</b>
University	132,645	50.4%	11.5%
Technical and Vocational	99,878	32.7%	8.7%
<b>Grand Total</b>	<b>1,151,134</b>	<b>38.9%</b>	<b>100.0%</b>

*Source: Educational Research and Development Center-CRDP*

Overall, the public sector absorbs about 38.9% of students enrolled in the Lebanese educational system. However, important discrepancies exist between the cycles in question. The share of the public sector is only 23.7% of the “kindergarten” cycle.

<sup>5</sup> All the given statistics in this report (except those specified) are taken from official publications of the CRDP.

<sup>6</sup> This percentage does not include the “private-free sector” which could be considered as part of the “public sector” because of the subsidies it gets from the latter.

This weak share is primarily due to a non-generalization of this cycle in all public schools. Additionally, this cycle constitutes three years in the private sector (3-5 years), and only two in the public sector (4-5 years).

The share of the public sector (in terms of the number of students enrolled) differs from one cycle to the other. It varies from 23.7% (kindergarten) to 35.3% in the primary cycle, then to 45.7% in the intermediate, only to reach 54.1% in the secondary cycle. Also, it is important to note that the tendency of increasing effective government commitment in the production and funding of education services is opposite to the tendencies observed in developed countries. Indeed, in the latter, the government is relatively more present in the initial cycles (kindergarten, primary and intermediate) through public schools. The “pyramid” seems to be inverted in the Lebanese case, where the government’s role (through public schools) increases significantly in the cycles of general education.

Moreover, the two cycles, kindergarten and primary, represent around 53% of the whole scholastic population registered in general education, technical college and university.

Finally, the Lebanese University itself absorbs more than half of the students in higher education; the rest attend private universities. In addition, technical and vocational education is generally dominated by the private sector which absorbs more than two-thirds of the total. A detailed analysis of these two sub-sectors, technical and higher education will be developed in a later section of this report.

### Summary 3

- 1. The reality of the Lebanese educational system clearly indicates it can not be considered as “a dual system”. This system is rather composed of two adjacent sectors.*
- 2. The nature of the “inverted pyramid” dominates the public educational system. Thus, the portion of the public sector increases from one cycle to another, which indirectly reflects the extent of governmental commitment.*

## 2.3 THE EFFICIENCY OF THE LEBANESE EDUCATIONAL SYSTEM

The efficiency of the Lebanese educational system, measured through a set of standard indicators, is neither homogeneous nor linear. Its efficiency significantly varies between the sectors in question (public or private) and within the same sector (depending on the cycle, the region, etc.).

The indicators measuring the efficiency of the Lebanese educational system can be grouped in two main categories: the first measures the efficiency of the system through the performance at the level of outputs; the second measures the efficiency of the system through the performance estimation at the level of inputs, i.e. using necessary resources to produce a service.

### Category 1: The efficiency of the system through output indicators

- Enrollment rate
- Graduation rate
- Failure rate or repetition rate
- Retardation/retention rate
- The cohort that describes that detailed flow of students

### Category 2: The efficiency of the system through input indicators

- School size (number of students)
- Student/teacher ratio
- Average class size
- Average age of teachers
- Diplomas/Academic qualification of teachers
- Schools equipment
- Schools infrastructure (i.e. buildings)

### 2.3.1 The Efficiency Measured by Output Indicators

#### A. The gross and net enrollment rates

The following two tables (tables 2 & 3) detail the different enrollment rates (gross and net) by region (Mohafazat) and by cycle:

**Table 2: Gross rate of enrollment (2001-2002)**

Location	Kindergarten		Primary	Intermediate only	Intermediate and Vocational	Secondary only	Secondary and Technical
	(3-6 yrs)	(4-6 yrs)	(6-12 yrs)	(12-15 yrs)	(12-15 yrs)	(15-18 yrs)	(15-18 yrs)
Beirut	81.2%	96.6%	105.4%	90.0%	93.0%	59.6%	82.4%
Mount Lebanon	88.4%	105.8%	109.3%	86.0%	88.0%	52.0%	68.4%
North Lebanon	71.8%	94.9%	111.0%	70.2%	73.3%	35.1%	47.1%
Bekaa	79.3%	105.9%	105.0%	70.6%	72.5%	36.2%	48.6%
South Lebanon	59.9%	76.6%	85.5%	63.5%	64.8%	33.0%	46.1%
Nabatieh	72.9%	97.2%	98.0%	73.1%	74.8%	35.8%	46.7%
<b>Lebanon</b>	<b>77.4%</b>	<b>97.8%</b>	<b>104.7%</b>	<b>76.3%</b>	<b>78.5%</b>	<b>42.7%</b>	<b>57.2%</b>

Source: Educational Research and Development Center-CRDP

**Table 3: Net rate of enrollment**

Location	Kindergarten	Primary	Intermediate Only
	(3-6 yrs)	(6-12 yrs)	(12-15 yrs)
Beirut	79.5%	97.0%	71.5%
Mount Lebanon	86.4%	99.0%	65.1%
North Lebanon	70.4%	92.2%	44.2%
Bekaa	76.0%	88.8%	45.1%
South Lebanon	59.2%	74.5%	45.0%
Nabatieh	71.7%	86.4%	51.7%
<b>Lebanon</b>	<b>75.6 %</b>	<b>91.5%</b>	<b>54.0%</b>

Source: Educational Research and Development Center-CRDP

What should we consider in an analytical reading of these two tables?

- i. At first, it is important to note that the different rates are calculated using an estimation of the distribution by age brackets of the Lebanese population. This estimation can vary from one source to the other (Ministry of Social Affairs-1996, Central Administration of Statistics-1997, ACS 2004), and consequently can lead to different estimations of enrollment rates. The present report is based on the statistics published by the CRDP.
- ii. The gross rates of enrollment, for the kindergarten cycle, are calculated according to two age brackets. The first is 3 to 6 years as applied by the private sector, and the second is 4 to 6 years as applied by the public sector. In fact, despite the fact that this cycle does not exist in all public schools, when it exists, kindergarten is restricted to ages 4-6 years, as mentioned earlier.
- iii. The gross enrollment rates sharply increase between these two age brackets. Yet, it varies from 77.4% for ages 3-6 years to 97.8% for

ages 4-6 years. How to explain this sharp difference? A detailed reading of the rates shows the following evolution:

- Gross enrollment rate for ages 3-4 = 37.4%
- Gross enrollment rate for ages 4-5 = 91.1%
- Gross enrollment rate for ages 5-6 = 104.4%

The enrollment rates for ages 4-5 and 5-6 years are sharply higher than for the 3-4 years-bracket. The jump from 37.4% to 91.1% is the result of two phenomena:

- The enrollment rate of children increases “naturally” with age (the behavior of households raises pressure for the enrollment of children of 4 years rather than those of 3 years).
- It is also a direct consequence of the public sector’s intervention on the education “market”. In other words, the supply, availability of this service in public schools (at the age of 4), creates its own demand, and consequently increases the gross enrollment rate.

Thus, it becomes important to note the positive impact created by the public sector on the different enrollment rates. In other words, the generalization of kindergarten in all public primary schools along with using a three-year cycle can only significantly improve the gross enrollment rates, allowing therefore the achievement of the objectives set in the MDG<sup>7</sup>.

Furthermore, available studies show that students enrolled in kindergarten are generally better-prepared than children integrated directly into the primary cycle, and therefore perform significantly better in terms of success rates, which reduced retardation/retention and drop out rates.

- iv. The gap between the gross and net enrollment rates increases from one cycle to another. The gap is limited in the kindergarten cycle (77.4% and 75.6%, respectively; a difference of 1.8%). It becomes greater for the primary cycle (104.7% and 91.5%, respectively; a difference of 13.2%), and finally reaches a high level for the intermediate cycle (76.3% and 54.0%, respectively; a difference of 22.3%). These differences indirectly reflect the level of the repetition rate (failure and retardation/retention).

Equal chances of success, and thus of educational preparation, as well as access to basic teaching, start at the pre-school level. To remedy this inadequacy, the establishment of the two following actions (which are further developed in a later section of this report as strategic approaches) should be anticipated. The first action is

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<sup>7</sup> The Objectives of the Millennium for Development (Millennium Development Goals- MDG), Lebanon Report

the generalization of the pre-school cycle (kindergarten) in all public schools, as the public sector only partially provides this service. The second is the extension of this cycle to ages 3-5 from ages 4-5 years which is currently implemented in the public pre-school level.

These actions will consequently increase the enrollment rates in young ages, and thus reduce the retardation/retention and drop out rates in the following cycles.

## **B. The success, retardation/retention and drop-out rates**

On the basis of available performance indicators, a chart can be formed in order to illustrate graphically the theoretical flow of 1000 students. The following table (table 4) indicates, for each grade, the distribution of students between the three possible options: pass, repetition and drop-out. For the 2001-2002 school year, the results are as follows:

**Table 4: The rates of performance in primary and intermediate (2001-2002)**

Type	Year	Pass Rate	Failure Rate (repetition)	Drop Out Rate
Primary	1 <sup>st</sup> year	93.71%	4.87%	1.42%
Primary	2 <sup>nd</sup> year	92.95%	6.21%	0.84%
Primary	3 <sup>rd</sup> year	92.62%	6.53%	0.85%
Primary	4 <sup>th</sup> year	83.08%	14.46%	2.46%
Primary	5 <sup>th</sup> year	87.51%	9.46%	3.03%
Primary	6 <sup>th</sup> year	86.04%	10.00%	3.96%
Complementary	7 <sup>th</sup> year	72.25%	20.31%	7.45%
Complementary	8 <sup>th</sup> year	82.49%	11.55%	5.96%
Complementary	9 <sup>th</sup> year		8.7%	

*Source: Educational Research and Development Center-CRDP*

This table can also be crossed with explanatory variables such as: the sector, region, and socio-economic conditions of households – as it was the case in the study on “Free Compulsory Education in Lebanon”<sup>8</sup>.

This report uses some results of the aforementioned study that only proves/confirms the heterogeneous character of the Lebanese educational system. Moreover, on average in Lebanon, of 1,000 students that integrate the scholar system (from the first year of primary cycle), 75 students obtain the baccalaureate without repetition. This number is of 161 for students living in Beirut, 48 for North Lebanon and 24 for Bekaa. It is 224 for students of middle-class families, and 27 for students of disadvantaged families. Additionally, this rate is 9 students in public schools, and reaches 255 students in private schools.

The detailed analysis of these results shows that the performance of the educational system is strongly correlated with two types of variables. The first type includes the indicators which directly impact the performance of the students (educational

<sup>8</sup> Consultation and Research Institute, June 2000; Ministry of Education

background of parents, social class, family income, etc.), and the second type includes the endogenous variables of the system (quality of teaching, availability of equipment and laboratories, qualifications of teachers, conditions of work, overall educational environment, etc.).

The endogenous indicators of the educational system describe principally the manner in which the resources are utilized for providing the service. Is there an optimization in the allocation of these resources? Is this allocation rational? These variables indicate the existence of important flaws in the system, particularly at the level of resources optimization utilized for providing the service.

### 2.3.2. The Efficiency Measured by Input Indicators

The following table (table 5) shows that the performance of the private sector is notably superior to that of the public sector concerning optimization of resources, such as the ratio of students per class or the ratio of students per teacher. Moreover, the public schools enroll around 350,000 students with around 42,000 teachers, while the private schools enroll around 455,000 students with around 39,000 teachers.

**Table 5: Indicators by Sector (2003-2004)**

Number of Students by School	Public Schools	“Free” Private Schools	Private Schools
Number of teachers	42,352	6,286	39,270
Number of students	348,144	114,935	455,532
Number of schools	1,394	373	1,014
Ratio of students per class	19.8	23.7	22.2
Ratio of students per teacher	8.2	18.3	11.6
Breakdown of teachers by age:			
<30 years	25.2%	39.0%	30.6%
31-40 years	20.1%	33.1%	34.4%
41-50 years	29.3%	17.7%	20.7%
51-60 years	22.5%	7.6%	11.1%
61 years and more	2.9%	2.6%	3.2%
<b>Total</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>

*Source: Educational Research and Development Center-CRDP*

Other indicators (such as the educational attainment of the teachers, their average age, qualification in concordance with courses, number of contractual, etc.) also converge toward the same results. Table 5 also shows that about 25.4% of teachers in the public sector are 51 years-old or older while this percentage is only 14.3% in the private sector. In addition, around one-third of teachers in the public sector have, at most, a baccalaureate degree. All these indicators<sup>9</sup> show that the human resources issue, especially in the public sector, is critical; it strongly impacts the performance of the public schools.

<sup>9</sup> Human resources indicators are detailed in many documents; refer to PCRD.

In the same sense, the distribution of schools by size (i.e. number of students) shows important differences among the two sectors. In fact, 12% of public schools operate with less than 50 enrolled students. This percentage is reduced by 50% in the private sector (6% of total private schools). Again, the question of the optimization of the allocation of resources, both physical and human, should be solved.

**Table 6: Distribution of schools by size and by sector (2000-2001)**

<b>Number of Students by School</b>	<b>Public Schools</b>	<b>“Free” Private Schools</b>	<b>Private Schools</b>
<51	12%	2%	6%
[51-100]	14%	10%	11%
[101-200]	25%	28%	21%
[201-400]	29%	38%	27%
[401-600]	11%	16%	12%
[601-800]	6%	4%	7%
>800	3%	3%	16%
<b>Total</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>

*Source: Educational Research and Development Center-CRDP*

The input indicators – aforementioned in the tables – explain for the most part the performance of the Lebanese educational system measured by the indicators of output studied in the preceding section of the report. The quality of teaching and the performance of the Lebanese educational system have to undertake a change in the rationalization and an optimization of the utilization of resources used to provide this service. In this perspective, measures, such as adopting a new educational map, seem more than necessary.

Finally, one must note that the disparities in the analyses between the public and private sectors are equally present within each of these sectors. It is additionally more emphasized in the private sector.

#### Summary 4

1. *The gross enrollment rate for the first year of the kindergarten cycle (3 years) is 37.4%. This rate reaches 91.1% at the second year of the cycle (4 years). This strong rise is primarily due to the entrance of the public service on the education “market”.*
2. *Available studies show that students enrolling in kindergarten are better prepared and their success rate is significantly higher than that of children integrating directly into primary school.*
3. *The reinforcement of the public sector at the kindergarten stage will have a positive impact in two ways:*
  - i) *Significant improvement of the gross enrollment rates in the kindergarten cycle;*
  - ii) *Significant improvement of performance indicators (pass, repetition, and drop-out) in the primary cycle and thus sharp improvement in the enrollment rates (gross and net) in the primary cycle, which corresponds to the one of the MDG objectives defined for Lebanon.*
4. *The performance indicators of the Lebanese educational system undergo disparities among:*
  - i) *regions,*
  - ii) *social, economic and demographic variables,*
  - iii) *public and private sectors, and*
  - iv) *within the same sector.*
5. *Actual work must be undertaken in order to optimize and rationalize the resources utilized for providing public service as per education at the level of human resources, buildings and equipment.*

## 2.4 THE FINANCING AND THE COST OF THE SYSTEM

This section of the report, based mainly on the study entitled “The Size of the Public Sector<sup>10</sup>”, aims at estimating the educational system’s financing and cost in Lebanon. Public expenditures related to education were estimated at approximately LBP1,097 billion (USD731 million) in 2001<sup>11</sup>, which represents 4.4% of the GDP and around 11.1% of the government budget. In addition to this amount are the expenses incumbent upon the households. The latter are estimated at LBP1,744 billion (USD1,163 million). The households’ expenditures on education represent 7% of the GDP. The table below (table 7) sums up this information:

**Table 7: Total expenditures in terms of education in Lebanon (2001)<sup>12</sup>**

Item	Unit	State	Households	Total
Expenditures related to Education	<i>billion LBP</i>	1,097	1,744	<b>2,841</b>
Expenditures related to Education	<i>million USD</i>	731	1,163	<b>1,894</b>
State Budget	<i>billion LBP</i>	9,883		
% of budget	%	11.1%		
GDP	<i>billion LBP</i>			<b>24,918</b>
GDP	<i>million USD</i>			<b>16,612</b>
% of GDP	%	4.4%	7.0%	<b>11.4%</b>
Distribution by source	%	39%	61%	<b>100%</b>

*Source: CRI's Estimates*

During the past three decades, the cost of the educational system in Lebanon rose from approximately 8.6% of GDP in 1973, to 11.4% in 2001. In addition, the share of public funding increased from 29% in 1973 to 39% in 2001, while the number of children enrolled in public schools remained almost the same during this period, representing around 40% of the total students in all cycles. Consequently, between 1973 and 2001, the state’s contribution in financing this sector has significantly increased, without however affecting its “market share” in terms of number of students. Furthermore, it is important to note that the budget share allocated to education by households has sharply risen to almost 13% of their total expenses (Households Budgets, ACS, 1997), as opposed to less than 8% in 1966.

The table below (table 8) helps conduct a benchmark analysis with countries belonging to different categories of GDP/capita.

<sup>10</sup> Consultation and Research Institute and Marwan Iskandar, OMSAR, 2002

<sup>11</sup> This data does not include investment expenditures made by the Council of Development and Reconstruction nor by the Council of the South

<sup>12</sup> Recent data (Public Expenditure Review, World Bank) on the cost and financial structure of the sector do not vary greatly from those dating from 2001.

**Table 8: Education expenditure in percentage of GDP (2000)**

Country	Public Expenditures	Private Expenditures	Total Expenditures
Guinea	1.9%	-	-
Tanzania	2.2%	-	-
China	2.2%	-	-
Bangladesh	2.5%	-	-
Japan	3.6%	1.2%	4.8%
Korea	3.8%	2.8%	6.6%
Mexico	4.2%	0.8%	5.0%
Ivory Cost	4.6%	-	-
United States	4.9%	2.2%	7.1%
Hungary	4.9%	0.6%	5.5%
France	5.8%	0.4%	6.2%
New Zealand	6.0%	-	-
Lebanon	4.4%	7.0%	11.4%

Source: Public expenditure: World Bank (2004), private expenditure: OECD (2003). The figures for Tanzania, China and Mexico are for 1998

In conclusion, public expenditures related to the education sector are increasing, while the service produced by the public sector is stable (or decreasing), and the bill paid by the households is also increasing. This distortion in the sector's financing sources clearly shows the mismanagement and the waste of the public resources. Indeed, the State funds an important share of its employees' enrolment fees – at rates differing from one position to another – knowing that only 24.2% of civil servants' children are enrolled in public schools (as opposed to 37.3% of employees working in the private sector).

In addition, a student's average cost in the public sector was estimated at approximately 1,725,000LBP in 2001 and 1,631,000LBP in 1998. These figures are close to the average cost of a student enrolled in the private sector, estimated at around 2,000,000LBP for the same year.

### Summary 5

1. Expenditures related to education in Lebanon represented 11.4% of GDP in 2001, distributed between the State (4.4%) and the households (7.0%).
2. In comparison with 1973, the government's role has significantly increased in 2001 in terms of funding without however affecting its "market share" as per the number of students.
3. In addition, the households are allocating this service around 13% of their total budget, while this share reached only 8% in 1966. In other terms, the financial involvement of households has also sharply increased.
4. Around 75% of civil servants are paid by the government to enrol their children in private schools.
5. The cost paid by society on the educational system in Lebanon does not vary a lot from the private to the public sector. The difference resides in the source of the financing.

## 2.5 THE COUNCIL OF DEVELOPMENT AND RECONSTRUCTION'S PUBLIC INVESTMENTS

The last report published by the CDR is dated July 2005. The data analysis available in this document allows to form a clearer vision of the efforts undertaken – during the first decade (more precisely since January 1992) – by the public sector, notably the CDR, in terms of investments in the education sector.

Table 9 below specifies the amounts of the contracts ran by the CDR since 1992:

**Table 9: Public investments (CDR) as per education since 1992 (in millions USD)**

Type	Technical Assistance	Investment in Capital	Total
<b>General education</b>			
Contracts covering the period (January 1992 - December 2004)	10.7	145.5	156.2
Contracts of the year 2004	0.7	18.7	19.4
On-going contracts	0	84.9	84.9
<b>Technical and Vocational Education</b>			
Contracts covering the period (January 1992 - December 2004)	7.4	85.7	93.1
Contracts of the year 2004	0	20.8	20.8
On-going contracts	0	51.3	51.3
<b>Youth and Sports</b>			
Contracts covering the period (January 1992 - December 2004)	0	134	134
Contracts of the year 2004	0	5.9	5.9
On-going contracts	0	13.9	13.9
<b>Culture and Higher Education</b>			
Contracts covering the period (January 1992 - December 2004)	1.7	267.2	268.9
Contracts of the year 2004	0	0.2	0.2
On-going contracts	0	72.1	72.1

*Source: CDR Progress Report, July 2005*

On the basis of the consolidation of several contracts' amounts<sup>13</sup> allocated to the education sector<sup>14</sup>, it appears that, on average, approximately 97.7% of the amounts were attributed to physical investments, and the rest to scholarships and technical assistance.

Regarding general education, the total contracts amounted to around USD156 million between 1992 and 2004. This sum can be divided in the following way:

- Technical assistance: USD10.7 million
- Rehabilitation, extension of existing schools, reconstruction of damaged or destroyed schools, and equipment of public schools: USD86 million
- Construction of new schools: USD60 million

<sup>13</sup> Consolidation of contracts over the period January 1992- December 2004 and contracts in preparation

<sup>14</sup> This sector includes general education, technical and vocational education, higher education, in addition to culture, youth and sports.

These remarkable efforts, conducted during the past fifteen years, allowed the rehabilitation of all the public schools (1284 schools) damaged during the civil war, and the building (or enlarging) of an important number of schools thus answering the insufficiency at the offer level.

In this respect, the evaluation of unsatisfied needs can hardly be estimated through a global approach. In fact, needs vary from one region to another and from one school to another. A case-per-case in-depth study should be launched to estimate the investment required for:

- The radical elimination of the double shift system still existent in certain schools (particularly in populated urban zones such as Beirut, Tripoli, Saida, etc.).
- Answering the existent demand in certain regions that are still unsatisfied by the offer of the public service.
- Satisfying the standard criteria required for the quality of education, in terms of buildings and equipment (different ratios in square meters per students, available schools in timeworn or residential buildings).

Preliminary studies<sup>15</sup> have already tackled this problem. Yet, such efforts require consolidation, coordination and especially continuation. In fact, the estimation of needs requires statistical and demographic data that are currently unavailable for small geographical units (units smaller than Caza). Moreover, the current condition of buildings is evaluated by the schools' principals and not by an independent unit. Finally, the decision criteria related to the replacement/rehabilitation of schools or to the construction of new schools require thorough investigation<sup>16</sup>.

### Summary 6

1. *Since 1992, around USD156 millions were invested by the government, through the CDR, in the education sector.*
2. *This amount covers mainly the rehabilitation of existent schools, extension of current schools and reconstruction of destroyed schools (USD86 millions) and the construction of new ones (USD60 millions).*
3. *This amount significantly improved the public offer in the education service, whether on the quantitative (by increasing the number of available schools) or on the qualitative level (by rehabilitating and equipping the schools).*
4. *Nevertheless, further efforts should be undertaken to*
  - i) Radically eliminate the double shift system still existent in some schools;*
  - ii) Answer existing demands in certain regions unsatisfied by the offer of the public service;*
  - iii) Satisfy the standard criteria required for the quality of education in terms of buildings and equipments.*
5. *An in-depth study of existing needs (an educational map, a plan of reassessing schools, a study on the adequacy between reality and the norms) is necessary to provide a scientific tool for decision-making.*

<sup>15</sup> To our knowledge, two entities have tackled this subject: the CRDP through a published investigation entitled "Conditions of public schools" 2002-2003; and the Ministry of Education through the Unit of Maintenance and Engineering.

<sup>16</sup> In this regard, several criteria are relevant (current state of schools, ownership or rent by the State, value of the rent, availability of land for construction, evolution of the number of students, on-going projects, etc.), which makes the decisional process complicated. The analysis, thus, should be undertaken on a case-by-case basis.

## 2.6 TOOLS FOR THE CAPITAL STOCK ESTIMATION

This part of the report attempts to provide the premises aimed at estimating the capital stock invested in education. Thus, a comprehensive model was elaborated in order to establish these estimations. However, a lot of information is still lacking preventing the achievement of this objective. Therefore, the model is developed in its theoretical form, awaiting acquiring the missing variables. It is important to note that this model only applies to general education of the public sector as data pertaining to others sub-sectors (higher education as well as technical and vocational education) is inexistent.

First, the capital invested is constituted of the following components:

- Buildings and annex construction
- Equipments
- Land<sup>17</sup>

Table 10 below shows the distribution of the buildings for the year 2000.

**Table 10: Distribution of public schools' areas**

Area (in sqm)	<500	501-1000	1001-1500	1501-2000	2001-3000	3001-4000	4001-5000	>5000	Total
Owned	142	108	81	32	73	25	11	12	484
Freely rented	31	4	2	1		1			39
Total number of buildings	173	112	83	33	73	26	11	12	523
Average area	350	750	1250	1750	2500	3500	4500	5000	
Total area	60,550	84,000	103,750	57,750	182,500	91,000	49,500	60,000	689,050

*Source: Educational Research and Development Center-CRDP, 2000*

According to estimates, the construction cost of a school is \$300/sq.m.<sup>18</sup>. Therefore, the value of the capital stock is estimated at around USD207 million<sup>19</sup>. It is obvious that this first estimation presumes the following hypothesis:

- The schools rented for free by the government or offered to it become part of the capital stock
- The cost per meter square is USD300. Construction is considered as being brand new.
- The cost per square meter of built surfaces includes the cost of building external surfaces.

Consequently, it is important to note that these hypotheses have a tendency to overestimate the value of capital stock.

<sup>17</sup> The model developed in this report does not include this component. In fact, it is very difficult, almost impossible, to provide an acceptable estimation of the value of the lands on which schools were built.

<sup>18</sup> This cost should be multiplied by the built surfaces only, in order to obtain a global estimation of the stock capital invested. The external surfaces (sports courts, etc) are included in this cost.

<sup>19</sup> This is calculated accordingly: (689050 m<sup>2</sup>) \* \$300/m<sup>2</sup> = \$207'000'000.

Furthermore, it is important to add to the figure obtained previously all new constructions undertaken by the CDR during the period 2000-2005. The total contracts' amount is estimated at around USD83 million. Also, the figure of equipment is estimated at around USD13 million.

Thus, the value of capital stock held by the State in the education sector (general education only) is estimated around USD290 million.

The methodology described previously requires a more thorough investigation at the level of verifying the available data or at the level of comparing different sources of information or different approaches (estimations presented in the document "Education for all", the different budgets valued by sector and/or ministry, the given statistics at the level of each school or at level of schools – type, etc.).

### Summary 7

1. *The model developed in this section of the report looks to estimate the value of the capital stock held by the government in general education. Available data does not permit the accomplishment of this exercise at the level of technical, vocational or higher education.*
2. *The value of public capital stock, for general education is estimated at around USD 290 million.*

### **3. THE STRATEGIC APPROACHES OF GENERAL EDUCATION**

This section of the report attempts to expose a certain number of approaches and elements which should subscribe in the strategic vision of the horizon 2015. Other than improving the quality of education in general, the key idea underlying in the analysis essentially consists of restructuring the state's role, at the different cycles of education, in the processes of providing/financing the service.

The main objective of the proposed strategic orientations is to improve the public education service through the rationalization of its inputs. This optimization begins with the implementation of a new public schools map.

It should be noted that the orientations developed below are listed according to the curricula sequence (from kindergarten to secondary), and therefore do not represent a "by-priority" classification. On the other hand, many orientations can be developed and implemented jointly; therefore, this report does not aim at delivering a time-bounded strategic orientation. Its main objective is to list a certain number of strategic orientations that appear to be crucial for this sector.

#### **3.1 SPREADING KINDERGARTEN IN PUBLIC SCHOOLS**

The objective of this intervention – as mentioned above – is to increase the public enrollment level in the preschool cycle, in order to reach the level achieved in the primary cycle, i.e. 35.3% or more precisely 36.5% (level of primary public enrollment in the first year of the primary cycle). In fact, studies carried out by the CRDP show that the preparation of students throughout the pre-school cycle significantly increases their performance in the later educational cycles and effectively reduces the drop-out and repetition (failing) rates. The implication of the public sector at the basic stage of education incorporates exactly into the approaches designated previously: the government's role must be influential in the first education cycles, notably in basic education, and must gradually decrease in later cycles, giving more space to the dualist system (public and private). This typology of government commitment allows ensuring equality of opportunities; either at the level of access to a good quality education or the chance to succeed.

The intervention proposed consists specifically of enacting the following two steps:

- i. Add the preschool cycle in some public schools, mainly in urban areas where a clear need has been identified. In fact, currently, out of around 1,400 public schools, 924 have kindergartens. Priority should be given to areas where the gap resides.
- ii. Expand the cycle (currently two years in certain public schools) to become a 3-year cycle.

The cost of this type of proposition has been evaluated in the report “MDG Costing”<sup>20</sup>. It is around USD46.7 million and includes the following elements:

- For schools that have available space: rehabilitation of classrooms.
- For schools that do not have available space: construction of new classrooms.
- Various equipment and school supplies.
- Training of teachers (new and current) to integrate modern methods.
- Elaboration of new programs.

**Table 11: Estimation of kindergarten standardization cost in public schools**

<b>Cost Item</b>	<b>Figure in USD</b>	<b>%</b>
Construction or rehabilitation of new classrooms	36,683,530	78.5%
Equipment and furniture	5,910,640	12.6%
Training of new teachers	2,391,750	5.1%
Program to retrain current teachers	1,649,900	3.5%
New pedagogical programs	100,000	0.2%
<b>Total</b>	<b>46,735,820</b>	<b>100%</b>

*Source: CRI's Estimates*

As shown in Table 11 above, the elements of cost do not include salaries since kindergartens in public schools generally take advantage of the relatively large surplus of teachers in the primary cycle. A substantial effort of training and retraining is essential to guarantee qualified teacher in the pre-scholar cycle.

### **Summary 8**

1. *The role of the State should be reinforced at the level of basic education. This starts, first of all, at the level of kindergarten.*
2. *The construction of new kindergartens in some selected urban areas must be accompanied by a measure that adjusts the number of years in this cycle to 3 years.*
3. *The cost of these measures is estimated at around USD47 million.*
4. *These measures have a twofold impact:*
  - i) *sharp improvement as per enrollment rates in the cycle in question,*
  - ii) *sharp improvement in different performance indicators in the later cycles (primary and intermediate).*

<sup>20</sup> “MDG Costing- Lebanon”, Consultation and Research Institute- UNDP 2005

### 3.2 APPLICATION AND EXTENSION OF COMPULSORY EDUCATION

By the end of the 1990s, the Lebanese government started to theoretically set a system of free and compulsory education applicable until the end of the primary cycle. This approach aimed at reducing the structural distortions within the public education sector. Hence, the legislative framework is available, but its enforcement should be concretized.

The responsibility of the State, as stated earlier, implies enforcing compulsory education, not only for the ages 6-11 years – as is the case in the current laws – but to expand it to the end of the intermediate cycle, i.e. until the age of 14. In this case as well, the hypotheses developed in many detailed studies show that including the intermediate cycle in compulsory education would not imply major additional costs in terms of salaries and rented or built spaces, due to the current surplus registered as per these two issues.

Thus, some of the strategic approaches suggested in this report – and which actually are recurrent in different official reports would be to:

- i. Enforce the law that makes education compulsory until the end of the primary cycle (11 years).
- ii. Take necessary measures to make education compulsory until the end of the complementary cycle (14 years).

The first measure aims at enforcing an enacted law. Its application will have important repercussions on the enrolment rates in the primary cycle. The second measure aims at reaching the objectives set by the MDG, i.e. eradicating illiteracy for ages 15-24 years.

The enforcement of the law aiming at making education compulsory until the end of the intermediate cycle does not necessarily imply investment in infrastructure (building new schools). Indeed, current available places are sufficient to absorb the additional flow of students – including schools currently being built and/or rehabilitated<sup>21</sup> – except for certain cases that will be absorbed in the following strategic approach that deals directly with the quality of the services offered.

The expenditures required to set a law on compulsory education are based on the following points:

- i) Expenditures aimed at reducing the levels of drop-out and failing:
  - Set a program for the detection of difficulties
  - Training and upgrading teachers
  - Evaluation programs of the educational system's performance

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<sup>21</sup> Progress Report, CDR, 2005

- ii) Expenditures aiming at promoting the reintegration of children that are not enrolled:
- Development of special programs for unregistered children integrating the educational system
  - Training the relevant human resources
  - Programs' evaluation

Indeed, it must be through decreasing the repetition and drop out rates, along with the reintegration of children that are not enrolled, that compulsory education can be concretized. The table below (table 12) gives a detailed estimation of costs generated by the measures.

**Table 12: Cost of compulsory education application and extension**

Cost Item	Application of compulsory education (until 11 years)	Extension of compulsory education (until 14 years)	Total amount in USD
<b>Reduction of repetition and drop out rates</b>	<b>19,022,000</b>	<b>16,159,100</b>	<b>35,181,100</b>
Program for exposure of problems	200,000	200,000	400,000
Training	17,922,000	15,059,100	32,981,100
Evaluation of performance	900,000	900,000	1,800,000
<b>Reduction of non-scholarized rate</b>	<b>1,356,250</b>	<b>1,362,750</b>	<b>2,719,000</b>
Adaptation programs of the non-scholarized	50,000	50,000	100,000
Training of adapted human resources	406,250	412,750	819,000
Evaluation of programs	900,000	900,000	1,800,000
<b>Institutional Cost</b>	<b>1,000,000</b>	<b>1,000,000</b>	<b>2,000,000</b>
<b>TOTAL</b>	<b>21,378,250</b>	<b>18,521,850</b>	<b>39,900,100</b>

Source: CRI's Estimates

In fact, it is important to note that compulsory education must be accompanied by concrete measures aimed at improving the quality of education, mainly at the inputs level (buildings, equipment, learning conditions, and human resources). This measure is developed in later points.

### Summary 9

1. *The enforcement of the law on compulsory education until the end of the primary cycle is one of the sector's priorities.*
2. *The extension of this law to include the intermediate cycle which is necessary to halt illiteracy still present in the age groups 15-24 years estimated around 2.5% in 2000.*
3. *The cost of these two measures is estimated at USD 21.4 million and USD 18.5 million, respectively, totaling around USD 39.9 million.*
4. *The application of these strategic measures goes along with launching a project aimed at improving the quality of education, mainly through the input level.*

### 3.3 QUALITY IMPROVEMENT AND PUBLIC EXPENDITURES RATIONALIZATION

It is important to note that the implementation of the measures previously mentioned, implies launching another project: the improvement of the quality of education. Implementing compulsory education (first for primary then for intermediate cycles) must be accompanied by real efforts to improve the quality of basic education. The realization of this objective is achieved through the improvement of the “inputs” used for providing this service: physical inputs (buildings, equipment), and intangible inputs (human capital, pedagogical programs, management methods of institutions, flow of information, etc.). The improvement of these inputs directly affects the system’s performance level and significantly improves the sector’s different indicators (pass rate, drop-out rate and repetition rate). It is through the work on the quality of the system that the implementation of compulsory education until the age of 14 (year completed) would attain the two closely linked objectives of more efficiency and more equity.

Consequently, priority should be first given to completely eliminate the current system of double shifts existent in certain cities and schools. In this regard, according to estimates, this measure would cost around USD19.5 million, for the construction of around 426 new sections (around 35 schools have currently a double shift system). This initiative also allows solving the problem of certain “overburdened” schools in large agglomerates.

Moreover, an in-depth study must be conducted in order to evaluate the quality of actual buildings used for public education. Indeed, according to rare available studies dealing with this subject, a number of schools (the exact figure is difficult to acquire) do not meet the criteria and standard norms. Thus, an in-depth study on existing needs (new educational map, plan of rehabilitation of schools, study of the disparity between the reality and the criteria/norms, equipment needs) is essential in order to provide a scientific tool for decision-making. Improving the buildings’ quality should take into account variables such as rural/urban distribution and owned/rented distribution. Indeed, 30% of rural schools are owned by the State while only 6% of urban schools are owned by the State. This difference is mainly explained by the cost of land, which is much higher in urban areas.

The analysis of the current situation acknowledged previously in this report showed a series of inadequacies in the allocation of resources. The rationalization of this process starts by enforcing a new school map and improving the system at the institutional level. Indeed, the new school map should first put forth a logic of optimization of the resources’ utilization, while respecting the constraints derived from the government’s involvement in terms of the equality of opportunities at the access to education level.

On the other hand, significant effort should be made at the human resources level:

1. Improve teachers qualifications through training programs, or even academic programs
2. Improve the concordance between teachers academic background and their respective courses

3. Set up a Human Resources Department that will manage and help in enhancing the evolution of the teachers in their professional career.

As for the improvement of the system at the institutional level, several measures can be proposed. We will use those that are most recurrent in different reports and studies, which cover this subject:

- Encourage the local communities' participation (students' parents, municipalities)
- Orient the school as an integrated and interactive body with its environment (local cultural activities, etc).
- Institutional reforms:
  - Privileges of school directors, teachers' movement, etc.
  - Increase decentralization
  - Decrease bureaucracy
  - Integrate new technology
  - Improve the coordination between the public and private sectors
  - Continuous training and recycling

Finally, the rationalization of expenses requires a revision of the "free" private schools' status. The gradual decrease of their contribution in the Lebanese educational system must be launched and accelerated (even if it is already so). This sector tends to be replaced by the public schools.

### Summary 10

1. *The improvement of the quality of education starts with the radical elimination of the double shift still present in certain schools. The cost of this measure is estimated at USD 19.5 million.*
2. *Launching a study on the existent needs is essential for estimating the future investments in order to follow the norms of quality regarding buildings. Variables such as urban/rural and owned/rented should be taken into account. The cost of land is a crucial parameter for urban areas.*
3. *The rationalization of expenditures starts with*
  - i) *the establishment of a new school map,*
  - ii) *the study of a project aiming at assembling schools,*
  - iii) *and several measures at the institutional level*
4. *Improve human resources qualifications, competences and concordance*
5. *The rationalization of expenditures aims at gradually replacing the "free" private sector by the public sector*

## 4. TECHNICAL AND VOCATIONAL EDUCATION

### 4.1 A BRIEF OVERVIEW

Since the end of the civil war, technical and vocational education has experienced a slight growth in terms of number of schools and students in general; mostly in the public sector. More specifically, the number of students in the latter sector grew from 7,451 in 1990, to 18,448 in 2000, and then up to 32,655 in 2003-2004. This resulted in a sharp increase in the share of the public sector in this field, despite the private sector's predominance at this level. The share of the public sector rose from around 18% in 1991-1992 to 25% in 1999/2000 and up to 32.7% in 2003/2004. During this last school year, students in the technical and vocational cycle represented around 7.3% of the total students in public education cycles, compared to 4.5% in 1990/2000.

The number of teachers and the administrative body affected by technical public education has strongly risen, from almost 1,303 in 1990/1991 to 3,443 in 1999/2000, reaching approximately 8,532 in 2003/2004. Between 1990 and 2003, this increase attained 555% while the increase of students reached 438%, i.e. the enhancement of teachers is more than proportional compared to the number of students. Also, in 2003/2004 the average number of students per teacher (and the administrative body) was 3.8 – while in 1999/2000 it was 5.36 and 5.7 in 1990/1991.

Concerning public schools in this field, their number was 28 in 1990/1991 and reached 40 schools in 1999/2000 then 64 in 2003/2004. The latest progress is a consequence of the government's reconstruction policies and more specifically the five-year plan developed during the 1990s. The latter consisted of creating 130 vocational schools, more than 23 technical schools, and 11 higher technical institutes. This plan was supposed to absorb 28,000 new students, with a cost of around US\$223 million. Moreover, the Ministry of Education had launched in 1999, the creation and equipment of 31 new schools thanks to a financing provided by the World Bank, the Islamic Bank for Development, and Arab Fund for Social and Economic Development, and the OPEC's Funds, in addition to the funding provided by the government. During the period 1992-2003, approximately US\$62 million were invested in this sector, and construction and equipment contracts of US\$59 million were in preparation<sup>22</sup>.

The table below (table 13) summarizes the main statistical data (2003-2004) covered by this sector.

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<sup>22</sup> Progress Report, CDR, July 2004

**Table 13: Students and teachers' distribution in technical and vocational schools**

<b>Parameter</b>	<b>Public</b>	<b>Private</b>	<b>Total</b>
Schools - Institutes	64	368	<b>432</b>
<i>Beirut</i>	0	58	<b>58</b>
<i>Beirut's suburbs</i>	16	131	<b>147</b>
<i>Mount-Lebanon</i>	6	44	<b>50</b>
<i>North Lebanon</i>	16	72	<b>88</b>
<i>Bekaa</i>	10	22	<b>32</b>
<i>South Lebanon</i>	9	28	<b>37</b>
<i>Nabatieh</i>	7	13	<b>20</b>
Number of Students	32,655	67,223	<b>99,878</b>
Share of Sectors (%)	32.70%	67.30%	<b>100.00%</b>
Number of Teachers	8,532	7,660	<b>15,292</b>

*Source: Educational Research and Development Center-CRDP*

## 4.2 MAIN OBSTACLES

This sector faces problems from the demand as well as the supply side.

- i. *At the supply level:* the main obstacles pertain not only to the public technical education – despite the quantitative boom it witnessed – but also the private one:
  - Lack of programs and curricula despite several attempts at updating them: predominance of “simple” specializations, with a focus on the tertiary sector which rarely results in added value jobs; furthermore, the predominance of theory over practice and the weak integration of technological developments.
  - Lack of specialized teachers, a continuous training, and the concordance of their specialization with the classes taught. In addition, there's a mismanagement of human resources invested in this sector and a significant surplus of teachers.
  - The structure and quality of equipments used in this educational sector are outdated and unequally distributed among schools. The level of coordination with the enterprises is very weak and when it exists it is not optimal despite efforts by the association of industrialists and the general management of vocational and technical education.
- ii. *On the demand level:* the main obstacles are the following:
  - The structural economic framework that is translated by a growth model that does not enhance job creation particularly in sectors relevant to the output of the technical and vocational systems (private and public).
  - The macro-economic developments that occurred during the post-war period, hindered the growth rates and consequently limited the demand from the labor market side.
  - The acute predominance of micro and small enterprises (less than 10 employees) in both the formal and informal sectors and the negative implications of this predominance on the level of labor demand from the private sector.

- The predominance of the weight of investment in real estate – in percentage of the total enterprises' investment – that seriously hinders the development of the labor demand.

Moreover, it is important to take into account the results of the study “Evaluation of the labor market needs; student’s follow-up study”<sup>23</sup>. This field investigation shows that students enrolled in technical and vocational schools are not convinced of their programs’ value, whether regarding the professional channels to the labor market or the education acquired. Students often enroll due to a lack of alternatives – failure in the general education system – and not willingly. Also, the choice of specializations is not studied, but emerges as a consequence to other variables (availability, closeness, etc.).

### 4.3 TOWARDS A STRATEGIC ORIENTATION

The main direction at the “vision” level is as follows:

- i.* Redefine the goals of vocational and technical education to adapt it to the economic needs, and particularly to specific needs that are to arise – at the offer level – subsequently to medium and long term economic reform. Therefore, a series of initiatives can be launched to accelerate an adjustment of the offer and demand:
  - New fields of specialization can be integrated into technical and vocational education.
  - Cancel or at least downgrade some outdated specializations.
  - Establish a mechanism to continuously study the needs of the job market and to suggest, consequently, the adequate measures. This mechanism could be part of the National Office for Employment after the latter’s reform.
  - Make education more flexible: a credit system, multipurpose education, etc.
  - Involve more and more enterprises in the training and supervision of students in a manner to re-equilibrate the program between theoretical and practical education.
- ii.* More effectively integrate this education in the secondary cycle and in higher education in order to reinforce the bridges between these different cycles in a manner to ensure greater professional mobility and to adapt to changes in the job market. This requires a real effort at the level of communication in order to supply students with elements that would allow them to make informed decisions for their futures.
- iii.* Improve the training of the teaching body and better-harmonize its distribution on the classes to offer, depending on their field of specialization.

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<sup>23</sup> Ministry of Education and Higher Learning – General Management of Vocational and Technical Education, January 2005 (World bank project LE 4298)

- iv. Improve the administrative body and structure and update the management process, and follow up to control and evaluate the impact of all that concerns this sector.
- v. Reinforce investments at the level of equipment, primarily in the public sector of technical and vocational education at the expense of simplistic alternatives which often tend to orient investments toward chaotic construction of poorly equipped educational buildings.
- vi. Decision-makers should notice that vocational and technical education is as important as higher education in terms of labor supply. In fact, in 2004, around 12,000 VTE's graduates entered the labor market, while around 20,000 universities graduates entered the labor market. Therefore, this sector is a crucial one, and does strongly impact the labor market.

## 5. HIGHER EDUCATION

### 5.1 A BRIEF OVERVIEW

The number of licensed universities in Lebanon (by presidential decrees) amounts to 41 institutions. The general management of higher education has recently finalized the documents of "equivalence" for diplomas of each of these institutions. It also signed a contract with Swiss audit committees to evaluate the conditions under which these institutions operate and their following of norms established by the government.

Available data regarding the number of students enrolled and human resources mobilized in this education cycle (teaching body and administrative body) for the year 2003/2004, can be presented as follows (table 14):

**Table 14: Distribution of students and human resources**

Institution	Number of Students Enrolled	Human Resources management	Human Resources teachers	Total Human Resources
<b>Total</b>	<b>132,645</b>	<b>4,426</b>	<b>12,000</b>	<b>16,426</b>
Lebanese University (LU)	50.4%	1,727	4,276	6,003
Arab University of Beirut	6.9%	445	605	1,050
Saint-Joseph University (USJ)	6.6%	449	1,384	1,833
AUB	5.0%	262	740	1,002
Kaslik University	4.1%	122	870	992
LAU	3.4%	371	162	533
NDU	3.1%	54	489	543
Others	20.5%	996	3,474	4,470

*Source: Educational Research and Development Center-CRDP*

- Lebanese University (LU) alone absorbed around 50.4% of all university students in 2003/2004 with around 66,850 students, compared to 62,602 students in 1999/2000. The weak progression

registered during this decade, is explained in part by the considerable increase of universities other than LU, that have curved, although relatively little, the flow of university students in the direction of private universities.

- The teaching body at LU (4,279 teachers) represented around 35% of the whole university teaching body in Lebanon in 2003/2004. This proportion amounts to 40% as per the administrative body. Note that the total number of teachers at LU was around 3,340 teachers in 1999/2000, which proves that a change of around 28% occurred at this level between 1999/2000 and 2003/2004, compared to the change of only 6.8% in the number of students enrolled in LU.

The table below (table 15) indicates the students' distribution in the Lebanese University by department and region (or section) for the year 2003/2004.

**Table 15: Distribution of Students by section and department**

Section	1 <sup>st</sup>	2 <sup>nd</sup>	North Lebanon	Bekaa	South Lebanon	Deanship	Total	%
<b>Departments and Institutes</b>								
Department of Arts and Sciences	5,027	3,356	4,990	4,271	5,459	907	24,010	<b>35.94%</b>
Department of Law and Political Science	2,648	1,829	1,390	1,225	998	0	8,090	<b>12.11%</b>
Department of Sciences	4,543	3,839	2,227	361	694	61	11,725	<b>17.55%</b>
Department of Economic Science and Management	1,659	1,647	582	0	380	34	4,302	<b>6.44%</b>
Department of Public Affairs	765	734	0	0	0	15	1,514	<b>2.27%</b>
Department of Education	773	962	0	0	0	288	2,023	<b>3.03%</b>
Department of Engineering	630	982	462	0	0	27	2,101	<b>3.14%</b>
Institute of Social Sciences	1,911	776	1,084	733	1,266	417	6,187	<b>9.26%</b>
Department of Art	490	573	323	210	0	48	1,644	<b>2.46%</b>
Department of Health	409	479	362	332	445	90	2,117	<b>3.17%</b>
Department of Agriculture	0	230	0	0	0	0	230	<b>0.34%</b>
Department of Medical Sciences	0	684	0	0	0	0	684	<b>1.02%</b>
Institute of Applied Sciences and Economics	910	0	0	0	0	0	910	<b>1.36%</b>
Department of Dentistry	0	239	0	0	0	0	239	<b>0.36%</b>
Department of Pharmaceutical Sciences	210	0	0	0	0	0	210	<b>0.31%</b>
University Institute of Technology	0	0	0	0	418	0	418	<b>0.63%</b>
Department of Touristic Sciences	405	0	0	0	0	0	405	<b>0.61%</b>
<b>Total</b>	<b>20,380</b>	<b>16,330</b>	<b>11,420</b>	<b>7,132</b>	<b>9,660</b>	<b>1887</b>	<b>66,809</b>	<b>100%</b>
<b>Total in percentage</b>	<b>30.50%</b>	<b>24.44%</b>	<b>17.09%</b>	<b>10.68%</b>	<b>14.46%</b>	<b>2.82%</b>	<b>100%</b>	

Source: Educational Research and Development Center-CRDP

- The budget expenses attributed to LU grew from LL 52 million for 1993 to LL173.2 billion for 2005 (in 2004, this amount was LL165.4 billion). The

investment expenses financed through contracts signed by the CDR reached around USD264 million during the period 1992-2004. This amount mainly comprises the cost of residential blocks construction in Hadath (USD223.5 million). The contracts in progress with the CDR include primarily the construction project of a Lebanese University in North Lebanon<sup>24</sup>, estimated at around USD138 million divided into three phases, according to the available finances.

- Several available indicators of the current expenses' structure sum up as the following:
  - The major share of these expenditures is used for salaries, social allowances and rents. These represented between 70% and 75% of all expenditures in 1995 and reached 99% of expenditures in 2001, of which 9% was for the rent of buildings.
  - Though the average is between 18 and 20 students/ teacher, there is a large variability of the average number of students per teacher among the different sections and departments of LU. Thus, the average cost per student in 1999/2000 varies from a minimum of LL 1.356 million in the Department of Law and Political Science (all sections included), to a maximum of LL11.53 million in the department of dentistry. The average cost of all sections and departments in LU per student is around LL2.6 million in 2003, and LL2.4 million in 1999/2000 (compared to 1.67 million in 1994/1995). The average cost within the departments of sciences along with the Department of Economic Sciences and Administrative Management is quite close to this total average, while it increases in the Department of Engineering, Agriculture, and Dentistry, where the costs in private universities is less significant.

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<sup>24</sup> the campus will include 10 departments and will accommodate around 15,000 students, along with an athletic complex.

**Table 16: Cost per student at Lebanese University by the department and section for the academic year 1999-2000 (in million LL)**

Department	Deanship	1 <sup>st</sup>	2 <sup>nd</sup>	3 <sup>rd</sup>	4 <sup>th</sup>	5 <sup>th</sup>	6 <sup>th</sup>	Average Cost
Department of Sciences		2,495	2,354	2,737	3,052	3,444		2,533
Department of Law and Political Science	652	1,232	1,372	1,334	1,599	1,613		1,356
Department of Education	989	4,538	5,375					3,635
Institute of Social Sciences		2,216	3,188	3,135	2,330	1,809		2,378
Department of Arts and Sciences		1,747	2,508	1,453	1,485	1,697	3,664	1,755
Department of Art		6,747	4,372	4,998	6,442	3,354		5,471
Department of Public Affairs	630	3,203	2,537					284
Department of Economic Sciences as Administrative Management		2,675	2,080	2,619				2,468
Department of Agriculture	6,250							6,250
Department of Engineering		7,806	3,451	6,635				5,317
Department of Health		5,511	3,618	4,635	4,185	3,862		4,245
Department of Medical Sciences	7,125							7,125
Department of Pharmaceutical Sciences	7,749							7,749
University Institute of Technology	4,748							4,748
Department of Touristic Sciences	2,894							2,894
Department of Dentistry	11,530							11,530

Source: Lebanese University, Central Management of Statistics 1999-2000

## 5.2 MAIN OBSTACLES

Many problems and major obstacles emerge facing public higher education, such as:

- A lack of strategic vision in terms of unity, centrality and identity of LU.
- A mayhem of politico-communitarian interference in this sphere from which academic independence is a main condition for its success.
- Chaotic spreading of public higher education's buildings.
- Enormous disparities concerning the teaching body's level of qualification and training.
- Existence of obsolete programs and teaching methods in numerous departments of LU.
- Outdated management methods and an almost complete lack of flow of data to effectively understand the "successes and failures" of this education.
- More generally, weakness of the government's control mechanism concerning private higher education.
- The macro-economic and sociological factors that generate important flow of migration (mainly with young graduates searching for their first employment).

### 5.3 TOWARDS A STRATEGIC APPROACH

The main elements of a development vision for public higher education sum up as follows:

- Decide on the question of this education's centrality and unity, on the level of buildings and programs, methods of recruitment of human resources, management methods, organization of internal workings of departments and the flow of necessary data bases.
- Complete, in medium term, the construction projects and equipment of the Choueifat-Hadath, Tripoli, Bekaa and Nabatieh campuses as it is recommended in the SADTL. The centralization of the Lebanese University in these campuses will free some available spaces that could be used for either VTE education or professional and continuous training provided by the LU.
- Guarantee an optimal distribution of departments and specializations between the four campuses (taking into account the specific regions and their needs concerning the job market), with an orientation more focused on disciplines that have an applied or technological nature.
- Control the flow of students entering LU, by progressively generalizing entrance exams, and regulating the recurrence of repetition, particularly in the first year.
- Revise the status of teachers, subscribe them in continuous training, and encourage research and scientific publications according to internationally recognized norms.
- Lebanese University must acquire the means to achieve average active participation in scientific research and consequently become a key factor in the innovation sector, thus promoting stable and continuous economic growth.
- Finally, LU can indeed orient itself towards productive activities<sup>25</sup> to become, through its own centers of research dependent on different departments, a permanent active player (supporting agriculture sector, participation in statistical national and sectoral statistical studies, development of university publications, participation in bids for specific studies, etc.).

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<sup>25</sup> Botrous Rouhana, An-Nahar 19/10/2005

**ANNEX: CHILDCARE (AGE BRACKET 0-2 YEARS)**

Statistics pertaining to this cycle are rare. There have been no specific studies on this issue. This analysis will thus attempt to crosscheck the different available statistics (a rather dull task) in order to obtain a clearer vision regarding this cycle.

The “child care” cycle concerns children from birth to the end of 2 years. Thus, it is predominantly made up of nurseries and childcare (whether at home or out). Its importance can be emphasized at two levels.

*a. At sectoral Level*

According to certain quality criteria, the nursery, can give infants valuable tools to start the general education cycle with ease. This cycle can thus have beneficial repercussions on upcoming cycles of education. Therefore, it can become one of the key variables in the optimization of the education sector’s performance.

*b. At macro-economic level*

The weak participation rate of women in the workforce (62.2%<sup>26</sup> of women aged 15 to 64 years are housewives) could be caused by the presence of a child at home. Yet, the establishment of nurseries can probably “free” a population of women currently not working into the job market.

The most recent statistics reveal that around 8%<sup>27</sup> of the resident population is between the ages of 0 and 4 years, translating into around 300,000 children. Of these, the number of children concerned by nurseries (between 0-2 years) is estimated at around 180,000.

In a field study conducted by the Ministry of Social Affairs it is estimated that 3.3% of children aged 0-2 years are enrolled in nurseries. Therefore, the number of children cared for at home is estimated at 174,000 (against only 6,000 enrolled in nurseries). A series of hypotheses can be developed in order to give asses the impact on the workforce of a scenario such as opening nurseries.

*Hypothesis 1:* The ratio: number of children from 0-2 years/ number of households that have at least one child from 0-2 years is equal to 1.1.

*Result:* Through the 174,000 children not enrolled in a nursery or childcare, the number of households can be estimated at around 158,000. Thus, the number of households in Lebanon that have at least one child of 0 to 2 years not enrolled in a nursery is 158,000.

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<sup>26</sup> Investigation on the conditions of life of households, 1997

<sup>27</sup> Multi-Purpose Survey, 2004. It is important to note that the percentage is the same as than obtained at the time of the investigation on the conditions of life of households in 1997. However, the resident population estimates vary between the two studies. The study of 2004 estimates the population around 3.7 million, while the study of 1997 estimates around 4 million. Consequently, the number of infants ages 0 to 4 varies with the estimations between 300,000 and 320,000.

*Hypothesis 2:* The number of households that have at least one child from 0-2 years and do not have a mother is negligible (1%).

*Result:* The number of households is estimated at 156,000.

*Hypothesis 3:* The percentage of women from 15-49 years old in these households is 30%<sup>28</sup>.

*Result:* Thus, 109,000 is the number of women from 15-49 years and that have at least one child from 0-2 years old not enrolled in a nursery.

*Hypothesis 4:* The percentage of housewives in the age group 15-49 years is 57%.

*Result:* 62,000 housewives live in Lebanon and have at least one child from 0-2 years old not enrolled in a nursery.

*Hypothesis 5:* The percentage of housewives that have more than one child from 0-2 years old is estimated at 10%. This last group does not choose the option of a nursery.

*Result:* It effectively leaves around 56,000 housewives who are potentially affected by such a measure. This number must be significantly reduced to take into account the following constraints, among others:

- The level of education and qualifications needed to find employment on the labor market
- Cultural environment and social constraints
- The quality of nurseries
- Psychological constraints

This exercise shows that the obstacle to the housewives entry into the workforce (mothers of infants) is not necessarily linked to the lack of nurseries or childcare services. The economic impact is quite modest. The sectoral impact cannot be scientifically evaluated because of the absence of relevant data.

Finally, in the absence of any serious or in-depth studies that cover both levels (economic and sectoral); the only recommendation to formulate at this stage is to launch such studies. The strategic choice of this sub-sector of education is evidently the establishment of an in-depth study which would provide the basic elements for the elaboration of a vision at this level.

Currently, this service is exclusively produced by the private sector under different forms: commercial nursery and daycare, in-home childcare, child care families, presence of helpful households, etc. Moreover, the service's quality varies significantly: specialized nurseries, awakening activities, child care in the strict sense of the term, etc. To this heterogeneity in the quality and the form of service adds another problem: a blatant lack at the level of control of this activity by the public authorities. The study proposed must consequently cover themes such as: the identification of the role and responsibility of the public authorities, the establishment of a legislative and regulatory framework aimed at controlling the production of this service.

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<sup>28</sup> Multi-Purpose Survey. 30% of married women are between 15-29. The section of ages 15-64 (work force) was reduced to all the measure for the age of fertility.

### Summary

1. *The sector “childcare” is important at two levels:*
  - i) *Better prepare the child to start the basic education cycle,*
  - ii) *Improve the participation rate of women in the workforce.*
2. *This preliminary study shows that around 56,000 housewives could enter the workforce thanks to the establishment of an accessible and nearby childcare service.*
3. *However, at this stage, no measures can be recommended. In fact, no in-depth*