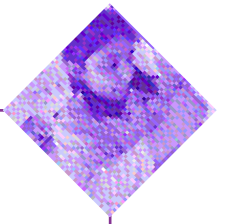

The Republic Of Tunisia
Ministry of Education and Training

THE NEW EDUCATION REFORM IN TUNISIA :

AN EDUCATION STRATEGY FOR THE FUTURE

2002 - 2007

October 2002

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STRATEGIC FRAMEWORK OF THE NEW SCHOOL REFORM

I - STRATEGIC FRAMEWORK OF THE NEW SCHOOL REFORM

I- 1. Education in Tunisia and in the World Today

Very early on, Tunisia has realized that a democratic school ensuring to its younger generations a training consonant with the demands and needs of a society that aspires to progress and is resolutely open onto modernity was the key of the edification of its future. Tunisia has therefore from the first years of independence, put education foremost among its preoccupations, making it an absolute priority and devoting to it the better part of its resources, which has it distinguished it in its geo-cultural sphere, at the continental and even international levels. This constitutes a source of pride for all Tunisians, even as, thanks to education, our country has achieved remarkable progress in all fields of economic and social life.

● The major school reforms since the Independence

It all began in 1958 with a first major reform that, without denying the legacy of a long tradition going far back into Tunisia history , has laid the foundations for a national educational system that

is coherent and modern, and among whose chief objectives is the double mission of opening up school, which had been for a privileged minority (14 per cent) to all the Tunisians, regardless of sex, race or religion, and of training expeditiously the cadre that the ongoing state-building urgently needs.

Then came the 1989 reform, consecrated by the Act of 19 July 1991, which aimed at adapting school to the profound changes in the economic and social structures of the country as well as the mutations in mentalities of the citizens thanks, precisely to the education for all policy initiated in 1958. This reform redefined the finalities and missions of school, instituted compulsory and free basic schooling, and restructured secondary education, in a manner that makes Tunisian education resolutely turned towards the future.

As soon as this reform was in place, the Tunisian educational system had to face new challenges, both internal and external. Internally, evaluations undertaken from 1995, and which are confirmed by other ones and international comparisons have revealed, in the light of the modest students performance, the persistent weakness of the system's efficiency and payoff as well as the important gap between the requirement (objectives set by the reform) and results at the level of the classroom.

Externally, profound and rapid mutations have upset our world vision and affected all the fields of social and individual life. These mutations require a rapid adaptation of production and work systems, and therefore they pose a serious challenge to school, which has to imperatively reconsider its objectives, methods and means, if it wants to go on fashioning students' profiles consonant with more and more stringent demands of society.

● A new historic phase

Everything indicates that humanity is on the verge of entering a new phase of its history. The technological and scientific revolution has brought about vast changes that surprise us by the swiftness of their dissemination and their direct impact on all the constituents of individual, social and public life.

Conscious of the new challenges posed by this historic evolution, most of the nations are preparing themselves by granting their policies top priority to

education and training. Thus, all countries are not undertaking profound revisions of their educational systems.

Hence, the abundance of the observatories, international evaluations and devices of comparison between the various educational systems so as to spot the most convincing experiences in the field and to profit from them.

Calculating the extent of these challenges and knowing the importance of the stakes in this field, the President of the Republic has anticipated the difficulties that would inevitably arise, by giving instructions, since 1995, "to start a deep and orderly reflection on the issue of the renewed mission of the school

(…) in a world bound to witness deep changes affecting the structure of society and knowledge, the methods of work and the means of production so that we ensure the best preparation for our future."

This approach is all the more pertinent that all the observers assert, on the basis of concordant indices, (all indices show) that the

future of schools will be one of the most important fields of competition between nations that are striving to take the lead in a world without frontiers full of economic and cultural challenges linked to globalisation. This will inevitably bring about major differences between educational systems that until recently had fairly similar objectives and strategies.

● The school and the needs for change

There is no place in today's ever-changing world for a "static" or stereotyped educational system. Likewise, there is no future for schools that shun innovation and prefer to adopt a status quo posture.

The issues posed by an increasingly complex world, one in which all that used to be taken for granted is now obsolete, require continual educational "state of awareness" and an ongoing reflection about the ways to update schools and their work tools.
This is all the more true that, as globalisation speeds up frantically, nations realise that, however developed they may be, they remain, as an expert in education has said, "developing societies", in educational matters. They constantly need to conceive improvements in their educational systems to adapt themselves to the constant

internal and external changes affecting their environment.

Tomorrow's world needs people who are able to analyse new and complex situations, interpret and synthesise contradictory data and come up with original solutions or alternatives for unexpected issues and problems. This requires skills and "qualities" that need to be developed at an early age and preserved and maintained throughout life.

These skills should be included in the various curricula, and the appropriate ways of achieving this should be devised. Learning is meaningless unless it relates to the requirements of society. The argument that schools are unable to predict future professions or anticipate external change is not valid: schools do not prepare people for specific posts, or train them for steady, definite professions, but cram them with a mass of knowledge.

Schools must now give the students the ability to master the tools of knowledge and prepare them for the acquisition of the skills and abilities necessary in life. Schools will be required - now and in the future - to teach people how to learn, to work, to be, and to live with other people.

Thus, the Tunisian school is more than ever required to play its fundamental roles by providing opportunities of growth to the individual's potentials,

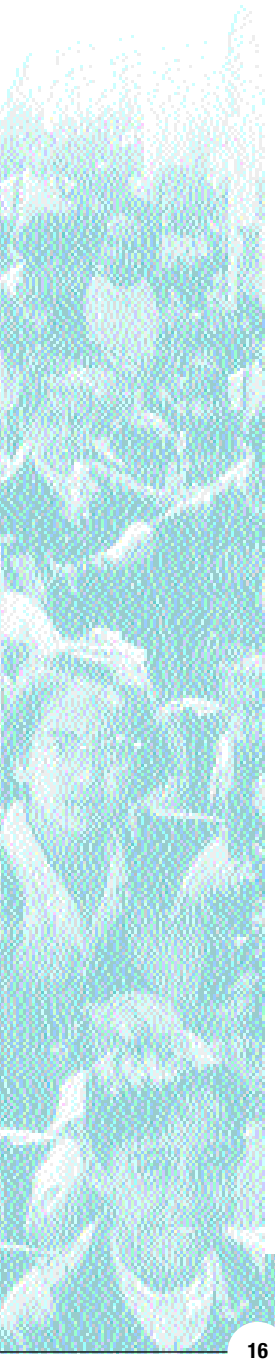
contributing to Tunisia's cultural and socia development and serving as a strong leverage to its economy.

These requirements have made it vital to upgrade the educational system at all levels : institutional, pedagogical, human and physical. Despite the important progress achieved since independence, our educational system still faces various problems namely those related to its efficiency which are challanges to be imperatively answered.

I- 2. The Tunisian School : Assets and Problems

● Tunisia : an "Educational" Society

During the four previous decades, the Tunisian system of education has accomplished outstanding results both quantitatively and qualitatively. "Education for all", an objective set by UNESCO for most countries of the world to be attained by the year 2015 has become a Tunisian reality. In addition to the full-schooling of children, a



voluntary policy to promote adult education and in-service training has served to increase literacy and to pave the way to a “lifelong education”.

Among the numerous assets of the Tunisian educational system, three are particularly noticeable :

- The gradual transformation of the Tunisian society into a genuine “educational society”. After the primary schooling “boom” of the 60’s during which period each hamlet and town district wanted its “own” school, came the expansion of secondary education, accelerating during the last decade to the point that even the most remote villages have had their preparatory school and often their secondary school built.

  Today, it’s time for the university level institutions to proliferate in all regions. Rarely would you find a governorate that does not have a faculty, a college or a technological institute.

  The “full-schooling” objective which had already been attained at the primary level is being achieved for the whole period of basic education. This is due to the measures taken to ensure free schooling and the strict application of the 6-to-16 year old compulsory education rule. Parallel to this, different other measures have been taken to push the schooling of students to the maximum age possible. As a result, the schooling rate both at the secondary and university levels has developed remarkably.

- The implementation of absolute equality among the sexes, and, in general, among all Tunisians to whom schooling has become the best means to achieve social promotion. A fair girls to boys ratio at all levels of education has become a reality. Recently, the number of girls has exceeded that of boys at the secondary and university levels. This major thrust in the exercise of the rights given to women on the eve of independence has had considerable impact on social and family life and on the cultural level of the population.

- The training of a highly-qualified personnel in all fields : this has helped attain self-sufficiency in human resources and stop relying on foreign “coopérants” towards the end of the 70’s. Better still, many Tunisians are currently working as “coopérants” in various countries.

  Yet, in order for them to last, these assets need to be maintained so that they form a sound foundation to a qualitative change both in our educational system and in our society. Besides, however important the accomplished progress is, we can not forget the problems we are confronted with and which are essentially the direct consequence of the rapid development of the educational system and the massification phenomenon which has resulted from it.

● Problems to be solved

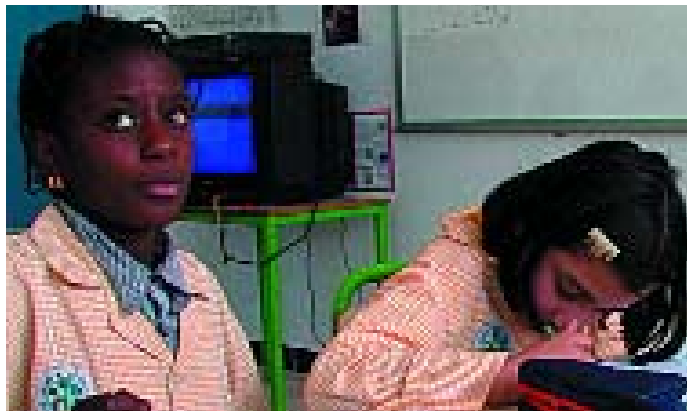
◆ The weakness of the school output

Despite the continuous improvement in the rates of intra and inter-cycles promotion and the consecutive decrease in school failure and dropout rates, many students still give up their studies especially at the level of the second cycle of basic education without acquiring the minimal competences required to integrate in the society.

◆ The predominance of the quantitative aspect in curricula

Programs are overloaded with subjects and there is a clear propensity for “encyclopedism”; the specific objectives and the cognitive contents are so numerous that it is hard to distinguish between what is fundamental and what is secondary or incidental.

The predominance of the quantitative trend at the level of the educational practices leads to a linear approach where synthesis is reduced to a minimum. Thus there is an accumulation of fragmented objectives and learning activities without any complementarities. Added to this, the itemization of subjects and the division of the same subject into different fields of activities lead inevitably to the partition of learning and the atomization of knowledge. We should not be surprised, then, that the learners’ performance is far below what was expected when the reform came into being in 1991.

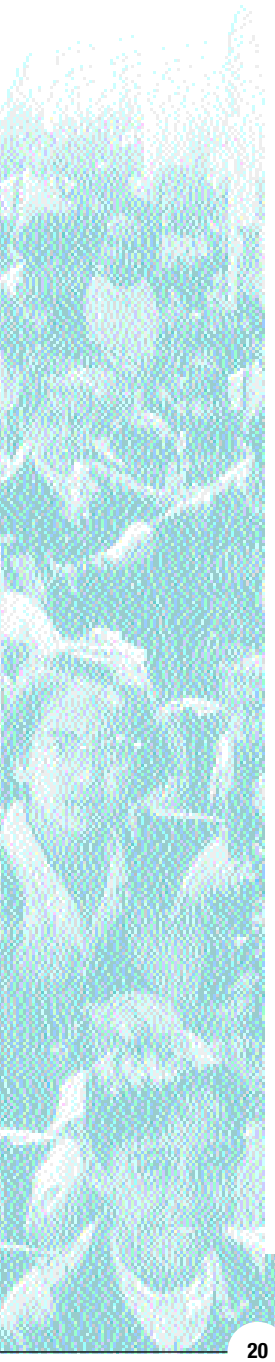


◆ The weakness of the students’ acquisition

The selectivity that characterizes our educational system does not necessarily ensure a perfect training for students. Indeed, most of them have obvious weaknesses in languages and mathematics. They have difficulties in communicating, writing and problem-solving.

A variety of internal and external evaluations have pinpointed this fact. Generally speaking, they have all led to the following three conclusions:

- Many students are placed, from the start, in a situation that would lead to failure because we do not make them acquire the knowledge and the skills essential for future studies. For different reasons, many primary school teachers seem not to attach the warranted importance to the fundamental skills (reading, writing, calculating). It has been proved that if a student does not master these skills right from the start, his future at school is irreversibly compromised.



A number of students show incompetence in dealing with real life situations outside the school context. Even when they have acquired all the required knowledge, and the necessary skills, they do not usually know how to use them in practical situations : problem solving and/or linguistic performance. This is usually explained by the fact that they were rarely trained to solve real problems and to produce authentic texts in a well defined communication context.

An analysis of students' papers in different exams has revealed a serious deviation in our educational system from the second cycle of basic school to university: fundamental learning (e.g. mastering the language) is occulted while non-essential learning (e.g. learning rules, procedures, algorithm) has become the ultimate goal of our educational system.

Result : the students acquire a great deal of knowledge, often useless, in very numerous disciplines, "that they manage to restore more or less correctly in tests centered on the control of knowledge, but that they don't know how to use when they are asked to produce a text, to make a synthesis, to solve a problem, to express and to justify a point of view ... And because it is not used, this knowledge ends up being forgotten. This results in a paradoxical situation: many students have "neither well-made nor well-filled minds."

◆ **The excessive centralization of the educational system management**

The centralization that characterizes our educational system, legacy of a double administrative culture (Ottoman and French), has amplified central prerogatives, and reduced in the same proportions, the authority of the regional administrations and schools. The sense of initiative has collapsed; innovation has become rare; the respect of procedures and instructions is considered an end in itself; in a way that the search for alternatives and solutions to improve the existing situation has stopped.

◆ **The lack of professionalism**

The improvement of the output of the educational system is tributary of the existence of highly qualified human resources at all levels: teaching staff, administrative staff, pedagogical assistance staff ... Teaching and school management require, today, in addition to motivation, a high degree of professionalism; which is unfortunately lacking at present because educators have received no specific training.

◆ **The absence of an evaluation culture**

A received idea – and a widespread one – stipulates that selection constitutes the unique guarantee of the quality of teaching and of the upholding of the standards and the degree value. This idea causes many teachers to concentrate their efforts on the "good" students, to the detriment of those in need of more attention. Thus, these students are progressively marginalized and find themselves bound to failure and exclusion.

For a country, like Tunisia, whose main wealth is its inhabitants' intelligence and know-how, and that has the ambition to catch up with advanced nations, producers of knowledge, the resolution of these problems at once is an absolute necessity and a challenge.

➤ **An absolute necessity** because globalization challenges us to upgrade quickly our educational system so that it trains not only more personnel, but competent, creative personnel that value civic spirit, who are capable to adjust to new situations that are often unpredictable, and related to the fast mutations of our society and its global environment.

➤ **A challenge because** it is about increasing in short-term and within the limits of our potentials, the internal output and the efficacy of the educational system so that it complies with the present international norms. To achieve this, we need to focus all our efforts on the improvement of the quality of learning and on the institution of a real equality of chances between students both at admission - which is already acquired in the 1st cycle – and at graduation.

I- 3. New requirements for Tunisian schools

These challenges place the Tunisian schools before new and unprecedented requirements that they must inevitably meet.

● First Requirement : Developing well-made not well-filled brains

In an era when the volume of knowledge doubles every fifteen years and its sources multiply, the school is losing ground as it competes with myriad other sources of knowledge. It would be erroneous, even dangerous, to continue to inculcate in students a knowledge in a range of subjects through memorization and the mechanical application of rules rather than developing competencies for analysis, synthesis and problem-solving.

To reach this goal, we first must clearly define what schools are supposed to teach. This requires epistemological thinking about the types of knowledge to be included in school curricula. The participation of various partners such as universities and representatives of schools' 'clients' (e.g. vocational training, universities, the employment market, etc.) and representatives of the civil society and the education community (teachers, parents and students) is essential.

Second, it is imperative to identify pedagogical and methodological approaches which boost the development of the intellectual capacities of the students and their autonomy, and enable them to acquire sound and lasting competences and opportunities for continuous training

and lifelong learning. This requires doing away with methods and practices leading to an accumulation of knowledge that is irrelevant in so far as it is rarely used in authentic communication or problem-solving situations.

● Second Requirement : Mastering new technologies

New information and communication technologies play an increasingly important role in the lives of individuals and societies. Mastering these tools has become vital in order to access the modern society of knowledge. We have to take them both as a means to update the education system and as a powerful teaching and learning partner. The enormous resources that these technologies provide in terms of knowledge and access permit the development of varied competencesThe 'educational content' industry has to be developed and integrated into the education system to become a common learning tool.

● Third Requirement : Preparing children and youth for active life

In addition to its fundamental role to instruct and educate, schools must provide children and youth with the tools necessary for future learning and a successful insertion in the professional world. This requires the development of four types of skills and competences beginning in the first years of Basic Education in the framework of the competency-based approach :

- **Practical skills** acquired through manipulation and experimentation from a problem-solving perspective. All disciplines contribute to the development of such skills, especially Science, Mathematics, and technology.

- **Methodological skills** consisting of transversal competences which enable the learner to set objectives for himself, plan for a mission, search for pertinent information and alternative solutions, prepare a report, and which write a summary or synthesis.

- **Entrepreneurial skills** consisting of the capacity to create and launch projects through collective or individual activities carried out in all educational fields and which parallel school activities.

- **Behavioral skills** and attitudes which consist of relying on oneself, cooperating with others, persevering, accepting criticism and having the ability to choose one's educational course consciously.

● Fourth Requirement : Ensuring quality education for all

The performance of an education system is not measured by the size of the school-going population or amount of funds allocated to it, but by the ratio between those enrolled in school and those who leave have experienced high-quality learning. We are now dealing with a new educational pattern which requires the establishment of pedagogical approaches that take into account differences between individual students and different paces and styles of learning, and which ensures equal opportunities of success for all through appropriate procedures of evaluation, diagnosis and remediation.

At another level, differences between education institutions in terms of national exams necessitate the setting up of programmes to upgrade schools with performance below national and regional averages.

● Fifth Requirement: Regional and global integration through learning

Today, learning must be put into the context of our global and regional realities. Therefore, schools must :

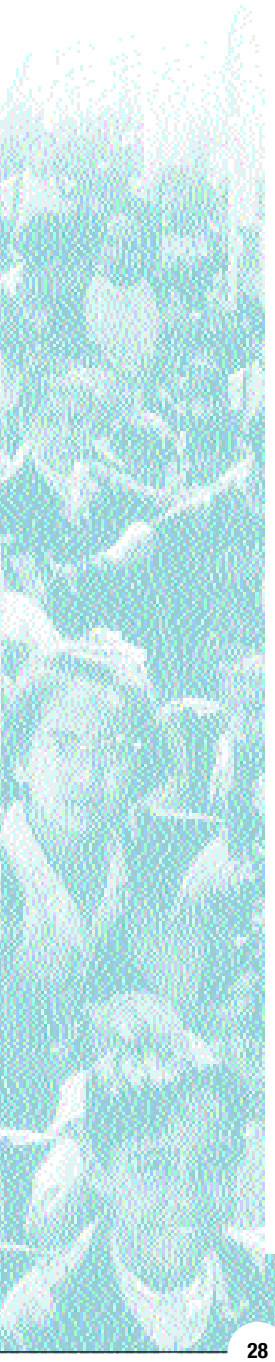
- be fully responsible for the dissemination and diffusion of our national culture. In this respect, it is vital to modernise the teaching of Arabic in terms of content, methods and organisation.

- develop the teaching of foreign languages. In addition to French, it is important to strengthen the teaching of English in light of its important place in the world today as a means of accessing and transferring knowledge. Our young generations will need to master English, both in spoken and written forms, by the end of the Basic Education cycle.

- develop in students strong technical awareness, not confined only to knowledge and skills through scientific and technical subjects, but also to ways of thinking which are the building blocks for forming today's 'citizens of the world'.

● Sixth Requirement : Promoting initiative

Soon after Independence, a unified national system of education was set up which put an end to the uncoordinated system inherited from the colonial period. This reform was based on a highly centralized management system covering all pedagogical, administrative and financial issues. Strict



teaching methodology guidebooks were used which hindered initiative and led teachers to believe that good teaching depended on the strict use of pedagogic instruction sheets accompanying teachers' books.

Any strategy which aims to ensure higher efficiency in education has to develop a new distribution of roles between central and regional authorities and institutions which allows each party to have full jurisdiction of their specific tasks. This can be achieved through:

- moving towards more decentralization in terms of administrative, financial, human resources and pedagogic management (e.g. continuous assessment, training programmes for staff, etc.)
- progressively adopting a demand in services approach for pedagogic training and assistance, rather than one based on supply capacity. This is likely to ensure better structuring of activities and use of resources; it will also more accurately reflect the true training requirements of education personnel.
- establishing school projects which include the participation of teachers, administration staff, students, parents for the preparation and implementation of school development plans.

- encouraging creativity and innovation at all levels toward improving students' learning and school performance.

Seventh Requirement : Setting standards for professionalism

Any modern high-performance educational system depends on the quality of its human resources. No variable has a greater impact on schools' performance than teachers' competence. The issue of teachers' qualifications is crucial and has to be dealt with initially at the level of the teacher's profile at the beginning of his/her career and, second, when teachers have already been working in the profession. Professionalism of teachers implies a mastery of both the 'science' and 'art' of their profession, and an ability to design and implement 'pedagogic projects'.

Professionalism also means planning lessons, assessing student performance, motivating students and providing remedial support based on regular learning assessment. A plan for increasing the professionalism of school heads, inspectors, advisors and trainers of trainers is also required.

Tunisia's Education System Today

II - Tunisia's Education System Today

Assessment of an educational system can be internal or external. Internal assessment consists of determining whether the system is reaching its objectives within a given period of time. External assessment involves comparing an education system with others, particularly those which represent good performance and high output.

For the purpose of determining the place of the Tunisian system in light of major education trends around the world, the principle of comparison was adopted. A sample of approximately twenty systems from the European Union, Finland, North America, Asia, Australia and New Zealand was selected. These systems provide a benchmark for evaluation and comparison.

Comparison between the Tunisian system and these systems is based on :

- General structure
- Educational orientation and streams
- Content and timing
- Curricula

II- 1 - General structure

There is a large amount of similarity in terms of general structure of the educational system among the countries in the sample. The most widespread educational ladder in the pre-university stage is characterized by :

- Schooling which lasts 12 years
- Schooling which is divided into 3 cycles (primary/ preparatory/ secondary)
- Compulsory education which lasts 9 years
- Compulsory education which is free of charge
- Use of pre-school education, to almost full coverage

On the whole, these characteristics are found in the Tunisian system, with the exception that in Tunisia the total duration of schooling is longer, lasting for 13 years. Pre-school education is

relatively new, optional, fee-paying and with a low coverage rate.

Pre-school education has grown rapidly in most developed countries. Today, we notice increasing early attendance in pre-school programmes for children between ages of 3 and 5. In most European countries, pre-school is optional (except in Luxemburg). Pre-school is free in most of European countries, except Germany.

A large number of countries divide compulsory education into two cycles which are distinct in terms of space and organisation. This is also the case in Tunisia. Only the Scandinavian countries combine the two cycles of compulsory education within a single school.

Though most countries agreed on the age of 6 for the initial school-going age, there is a difference in the distribution of the number of years which make up each cycle. For example, in most European countries, primary education lasts 6 years; however, in Australia, Portugal and some provinces in Germany, it lasts only 4 years. The second cycle lasts 3 years in Tunisia, but ranges from 2 in Belgium, 6 in Germany to 4 in France, Spain, Holland and Austria. Secondary education lasts 4 years in Tunisia, but varies in Europe between 2 years in England, Spain and

Holland , 3 years in France, Germany and Sweden, 4 years in Belgium, Austria) and 5 years in Italy.

II- 2. Orientations and streams

Most countries agree on the importance of ensuring that the entire cycle of compulsory education provides learners with a general training which forms the basis for later learning. The general rule is more specialized streaming is not to take place before the age of 15 or 16 before the end of compulsory education. Exceptions to this are Germany, Australia and Luxemburg where students are streamed at the end of primary education between ages 10 and 12. Such early orientation is criticized in Germany and Switzerland today.

Tunisia aims to be closer to the average European age of 13.8 years for the introduction of different orientations.

Our education system provides students with a common education in terms of content and evaluation. It lasts 9 years except in professional schools which have limited enrolment and are 'schools of second chance'.

The secondary school cycle consists of a 2-year common core program followed by another 2-year cycle for specialization in 5 areas leading to a 'Bac diploma', and preparation for higher education. With a new distribution of roles, a new program of vocational and technical education is now the responsibility of the Ministry of Vocational Training and Employment.

As for the distribution of students between general secondary education and vocational training, Tunisia is still far behind what has been achieved in the European Union. Most students oriented towards vocational training are those who involuntarily drop out of secondary education or do not obtain a Bac diploma.

II- 3- School timing

In the first cycle of basic education in Tunisia, the annual number of school hours ranges from 735 to 980, while the European average ranges from 760 – 830 hours. In the second cycle of basic education in Tunisia, the total number of hours is 840 a year, while the European average is 910 hours. In secondary education the minimum number of school hours differs from one stream to another, ranging from 650 hours in Arts (literary sections) to 910 hours in technical streams. The European average is closer to the latter.

Most European countries have flexibility in determining school timing as its management is the responsibility of educational institutions and/or teachers. The central authority establishes basic criteria (e.g. minimum number of hours, subjects) which institutions have to allocate according to their own needs. In Tunisia, however, timing is unified, with no flexibility for modificiation.

Another comparison is the distribution of timing in key disciplines. Of particular interest is the importance given to the teaching of languages in the first cycle of education. In Tunisia, 58% of time is devoted to teaching Arabic (30%) and French (28%), compared to 30% in the European Union for second language instruction.

Comparison of time allocated to the key disciplines in Primary Education

Tunisia	European Union (average)	Learning Fields
30%	20%	national language
28.5%	10%	foreign languages
13.5%	20%	mathematics
7.5%	20%	sciences
5%	15%	artistic activities
5%	5%	religious education
3.5%	10%	physical education

II- 4 - Curricula :

Comparison was made of the following subjects: English, Maths, Natural Sciences, Physical Sciences, History and Geography, Civic Education, Arts, Economics and Management. This revealed a number of defects and shortcomings in our curricula, including :

- absence of some types of learning,.
- outdated contents,
- separation between subjects,
- heavy focus on theory,
- weak integration of subjects,
- overall absence of new technologies in teaching,
- absence of free management of lessons.

Evaluations since 1992

III - Evaluations since 1992

A 1991 law instituted the principle of periodic evaluation in-line with overall educational reform. Internal and external evaluations have been carried out continuously since 1992.

III- 1- Internal evaluation :

The Ministry carries out continuous evaluation at two levels :

- Evaluation of the educational process (content of learning, teaching methods, ways of assessing students' acquisitions, teachers' performance, etc.) Pedagogical inspectors are in charge of this task through intensive visits yielding approximately 32,000 reports covering all subjects annually.

Evaluation of student learning through national examinations. Analysis of examination results allows for understanding of the validity of the school curricula, efficiency of the pedagogical methods and performance of educational institutions.

From these assessments, we can conclude :

- heavy weight placed on theoretical learning,
- an almost total absence of an apprenticeship system for learning diferent types of work,
- heavy weight placed on quantitative learning in the curricula,
- The curriculum is rigid,
- Generally low students' capability to search for information, analyse and synthesize low performance of students.
- written Arabic and French

III- 2- External evaluation :

The conclusions of 13 evaluations are centered around the following points:

- Abundance of subjects and a lack of integration
- Absence of focus the applied nature of learning
- Low student performance in speaking and writing
- Total absence of formative evaluation
- Absence of vocational skills in basic teacher training

- Lack of enthusiasm for school on the part of learners and teachers' because the role of schools is restricted to teaching

III- 3- International comparative evaluations :

Since 1998, Tunisia has taken part in two international evaluation exercises:

- The Third International Mathematics and Sciences Study-TIMSS-R evaluation assessing basic learning in Mathematics and Sciences for 8th graders aged 14 years in the Basic Education cycle involving 38 countries.
- The M.L.A.- Monitoring Learning Assessment evaluation which, in its last session, dealt with learning in Mathematics, Arabic and a transversal area integrating different subjects (Introduction to Sciences,

civic education and geography) involved everyday life competences for 10-year-old 4th graders in the Basic Education cycle. Twelve African countries participated in this evaluation.

III- 4- Results and conclusions :

Tunisia's first participation in TIMSS-R produced modest results with a ranking of 29 out of 38 countries in Mathematics and 34 out of 38 in Science. The poor performance of our students can be attributed to the following factors :

● In Mathematics

- ➤ An overall lack in Tunisian curricula of mathematical concepts and skills which are taught in other countries
- ➤ Limited opportunities for apprenticeship allowing students to apply mathematical skills and knowledge

● In Science

- ➤ An inadequate amount of time allocated to the teaching of science : 5% of total teaching hours in the second cycle of Basic Education compared to 12% in many other countries.
- ➤ No teaching of Physics in the second cycle of Basic Education

Concerning our participation in M.L.A, we were ranked first in Mathematics and Arabic and second in everyday life competences. However, we should be cautious about these results because:

- ● The participants are all African countries; therefore, comparison was made between educational systems with modest performance overall.
- ● The limited number of participants (11) does not constitute a sufficient sample for a meaningful and reliable comparison.

Major Directions of the Education Reform

IV - Major Directions of the Education Reform

The problems and weaknesses identified in the Tunisian education system need to be addressed comprehensively in a phased manner. There are six key issues :

- Placing the student at the core of the educational process
- Mastering new technologies
- Applying the principle of professionalism in teaching
- Focusing on educational institutions as the basic cell in the education system
- Emphasizing principles of equal opportunity and fairness between regions and schools
- Modernizing the education system and improving its performance and capacity to meet the current needs of the Tunisian society

IV- 1 - Placing the student at the core of the educational process

For schools to be successful, they must place the student at the core of what they do. This involves :

- ➤ pedagogic measures to improve learning
- ➤ structural measures addressing the educational cycles and orientations.
- ➤ Organisational measures relating to the organisation of school timing and school life.

Specific measures include :

- ➤ Improving curricula and teaching methodologies
- ➤ Promoting arts and cultural activities
- ➤ Reviewing the timing in Basic Education
- ➤ Including compulsory learning in the second cycle of Basic Education
- ➤ Creating new learning streams in secondary education and improving orientation mechanisms
- ➤ Ensuring better linkages between Bac and higher education sections
- ➤ Establishing a periodic evaluation system

IV- 1-1. Improving curricula and teaching methodologies :

◆ Curricula can be developed according to the following principles:

◆ Using international benchmarks for curriculum development, a task that the Ministry has undertaken and that is due to end in April 2002.

◆ Determining learning acquisition norms and standards for all disciplines at all levels. This task is due to finish in June 2002.

◆ Designing curricula according in-line with a competency-based approch

◆ Reviewing subjects and the amount of time allocted to each to emphasize the importance of key subjects (e.g. languages, Mathematics, Sciences), and to ensure better integration within and between subjects. This entails :

- Promoting the teaching of Science and technology overall, and introducing information and communication technologies at all levels of learning
- Consolidating the teaching of foreign languages in order to allow students to master 2 foreign languages by the end of the Basic Education cycle
- Enriching the cultural content of the curricula to familiarize students with different forms of cultural expressions and symbols
- Incorporating in school curricula pre-requisite competences for vocational training and higher education

- Providing enough flexible time and space for teachers to address students' remedial learning needs.

IV- 1-2. Promoting artistic and cultural activities :

Artistic and cultural activities are part and parcel of the educational process in addition to the role they play in teaching young people the ethics and stimulating learning. These activities aim to :

Contribute to the development of different forms of children's intelligence, including the intelligence of senses and intelligence of the brain, both of which

are required for balanced growth.

Develop children's imaginations, senses and artistic expression

Enrich the general knowledge of students by supporting literary, artistic and scientific learning, and integrating knowledge in different subjects

Teach principles of initiative, self-reliance and collective work.

A pilot school for the Arts has been established for students demonstrating artistic talent in music, drama and plastic arts. A new artistic learning stream is planned leading to a Bac degree for talented 9th graders.

To increase students' involvement in cultural activities in school and develop cultural content in the curriculum, an operational plan has been devised on the following principles :

- Enlarging the scope of cultural activities for as many students as possible
- Seeking variety and quality in these activities
- Expose students to cultural places by organizing visits to museums, cinemas, theatres and art galleries
- Developing partnerships between educational institutions and artists.

The plan consists of :

- Increasing the number of clubs in primary schools either by launching new ones or by activating the existing ones and seeing to it that more than one club is found in each school, allowing all students to practise a cultural activity either inside or outside the school. For this, new formulas of cooperation and partnership with the surrounding cultural spaces and the concerned organizations and associations have to be created.

  - Launching a cultural committee in each junior and senior high school whose function would be to plan, coordinate, carry out and assess the cultural activities of the various clubs within the educational institution.

  - Supporting the existing “cultural classes” and setting up new ones, and providing the necessary material and human resources to ensure their success, and therefore enrich the training students receive at school.

  - Setting up clubs specialized in cultural and artistic fields in all junior and senior high schools.
    Within this framework, at the start of 2001-2002 school year, the following actions were taken:

Establishment of a school cinema club in each junior and senior high school which plans movies for students inside the school, followed by debates enriching the pupils’ cinematographic and general culture as well as providing an opportunity for experiencing the art and ethics of discussion and dialogue;

Creation of clubs in the fields of theatre, painting, plastic arts, the internet and computer science in every junior and senior high school under the guidance of experts and experienced and motivated teachers regardless of the subject they teach.

Creation of music and body arts clubs in junior and senior high schools where specialized staff is available.

Creation of a regional committee to follow up the cultural activities at the level of each local education authority whose task is to prepare, follow up, implement and assess the regional planning of cultural activities and

to take all necessary measures to spread the bases, objectives and dimensions of cultural work within the educational institution.

IV- 1–3. Reviewing the school timetable in Basic Education

a. The weekly timing :

The current timetable in the first cycle of Basic Education in the Tunisian education system differs from that in Europe in terms of:

- the total amount of instruction time per week,
- allocation of instruction time for various subjects.

The average amount of instruction time per week in Europe is 21 hours at the start of primary schooling, although there is a wide range between European countries (e.g. 15 hours in Denmark up to 27 hours in Italy). The rate increases toward the end of the primary cycle, reaching 22.5 hours (ranging from 18 hours in Denmark to 27 hours in Italy).

By contrast, Tunisian students' attendance time is 22.5 hours per week in the first and second grades and 30 hours by the third, fourth, fifth and sixth grades.

We can, therefore, conclude that the timetable in the first cycle of Basic Education in Tunisia exceeds the average in all European countries.

The current organization of the school day is based on a 2-shift system with morning and afternoon shifts. Half the students in primary schools attend classes at 7:30 a.m. and the other half leave school at 5:30p.m. after having started classes later in the day. Hence, the necessity to introduce a series of changes to the total number of hours of instruction along with a revised timetable is proposed as follows :

- Introducing phasing of the total number of hours of instruction per week:
  - 20 hours in the first and second grades (rather than 22.5 hours)
  - 25 hours in the third and fourth grades (rather than 30 hours)
  - 30 hours in the fifth and sixth grades (same as now)
  - 32 hours in the seventh grade and 33 in the eighth and ninth grades (an increase of 2 and 3 hours compared to now).
- Distinguishing between the major disciplines and other disciplines in primary schools

There is now a clear distinction between subjects which constitute tools for acquiring knowledge, such as languages and Mathematics, and those having educational and cultural dimensions. On this basis, two types of learning have been defined :

- **priority learning areas** inculcate tools for acquiring further knowledge and are the basis for the later learning. They are taught with carefully planned progression and are only taught during the morning or afternoon sessions, taking up most of the daily, weekly and yearly allocated instruction time.

- **Learning areas with educational and artistic dimensions** (social, artistic and physical education), which contribute to the overall development of the learners' personality, the cultivation of talents and preparation for life in community. Such disciplines, which will be compulsory in the future, are included in-group sessions within clubs, which are free from the pressures of the traditional classroom settings and suitable for developing initiative and a sense of responsibility.

◆ **The club differs from the class in many ways :**

- **organization :** the club may be a workshop, a group with specific membership criteria, specialized groups, carried out in open-air or outside the chool (e.g. museums, municipality, community centers, etc.)

- **programmes :** clubs are characterized by flexibility through a general framework which offers a variety of approaches based on scientific skills and behaviors rather than knowledge.

- **assessment :** the very nature of this type of learning necessitates the adoption of a different system to assess objectives, approaches and results

- Teaching in the first and second year of the first cycle of Basic Education should be limited to 5 instead of 6 days per week, with one day devoted to club activities

- Adopting flexibility in school timetable in the first cycle of Basic Education and allowing schools the freedom to negotiate with parents the possibility of adopting a one-session system and reform of school start dates.

Comparison between the present timetable and the new one

Yearly timing		Difference	Yearly timing		Grades
New	At present		New	At present	
560	630	2_ hours	20	22.30	first
560	630	2_ hours	20	22.30	second
700	840	5 hours	25	30	third
700	840	5 hours	25	30	fourth
840	840	0	30	30	fifth
840	840	0	30	30	sixth
896	840	+ 2 hours	32	30	seventh
924	840	+ 3 hours	33	30	eighth
924	840	+ 3 hours	33	30	ninth

b- Allocation of instruction time for different subjects

Analysis of different high-performing systems confirms substantial differences in the allocation of instruction hours for different subjects. Revision of the subjects and timetable is required, based on the following considerations :

- Strengthening the instruction of languages through :

❑ **Improving the teaching of Arabic** by taking a series of qualitative structural and pedagogical measures, including :

Establishing a 'preparatory year' focusing on the development of oral activities during the early development a child's capacities for communication and expression;

Adopting a competency-based approach in which all subjects contribute to the development of communication and expression through both speaking and writing;

Including Arabic as a compulsory subject in all Bac sections.

This requires the development of pedagogical methods and teaching tools, as well as a new allocation of instruction time in all cycles and levels of education. Tunisian children learn Arabic as a language and as a culture. They constantly practise it in spoken and written forms in all fields of knowledge and it is used as the medium of instruction to learn other subjects, including Mathematics, Science, social sciences and others throughout the Basic Education cycle.

❑ **Revision of the time allocation for teaching French** in the different cycles of Basic and secondary education. The disadvantage of the current allocation is that it devotes a larger number of hours in the first cycle of Basic Education which sharply decreases in the second cycle and continues as a trend into secondary education.
Evaluative studies carried out in this respect are unanimous on the necessity of revising the amount of time allocated for French if greater efficiency is to be achieved. The proposed measure recommends decreasing the time allocation for French in the first cycle of Basic Education and increasing it in the second, as well as in secondary education. It also recommends the creation of "French clubs" to promote oral skills.

Generally, **mastering a language is not dependent on how much time is devoted to learning it**, but on the development of the ways, means and methods used to teach it, as well as on the preparation and teaching skills of teachers.

- **Reinforcement of the English language** by teaching it at an early stage and increasing the amount of time devoted to English instruction at subsequent levels. The plan suggests three hours per week of compulsory club activity in the fifth and sixth grades of Basic Education. It also suggests adding one extra hour (from 2 to 3 hours) to the present allocation in the seventh, eighth and ninth grades of Basic Education. The total number of hours allocated to the instruction of English in Basic Education would rise rom 168 to 420, yielding an overall increase from 2.3% to 6% as a proportion of the total amount of instruction time in the Basic Education cycle.

- **Consolidation of the place of Science according to international criteria :**

  - Increasing the amount of time allocated to the instruction of Mathematics by adding one hour per week (from 4 to 5 hours) at all levels of Basic Education, yielding an overall increase from 14.1% to 17.3% as a proportion of the total amount of instruction time.

  - Increasing the amount of time allocated to the instruction of "introduction to sciences" as a subject by adding 30 minutes per week (from 1.5 to 2 hours) at four levels out of six in the first cycle of Basic Education..

  - Including the teaching of Physics in the second cycle of Basic Education with one hour and a half of instruction per week, allowing the global timing for the teaching of Natural Sciences and Physics in junior high schools to increase up to 3 hours per week, consistent with international practice.

- **Development of " civic education "** by giving it a more practical character and including it in club activities in primary schools. In junior high schools, this involves field observation through visits to institutions (e.g. municipality offices, governorates and Chambers of Deputies headquarters, etc.), exposing students to real-life situations and participation in associations.

IV- 1- 4 Introducing optional learning in the second cycle of Basic Education

The second cycle of Basic Education constitutes a natural continuation of the first cycle and of the learning acquired in the first six years of schooling. The purpose of this cycle is to enable pupils to acquire a wide and solid background in Common General Education which prepares them to later make choices from a variety of different learning streams.

The number of children continuing to this cycle has increased as a result of improving pass rates. This has resulted in a student population with various features and differences in inclinations, needs and learning paces. For this reason, and on account of new orientations now available, it has become necessary to reorganize the educational structure in the last cycle of compulsory education, as follows :

- Providing a common set of learning objectives during grades 7, 8 and 9 for languages, science, social studies and arts, with approximately 90% of total instruction time allocated to them.

- Diversifying learning choices as early as grade 8 through the introduction of optional orientations of a scientific, technical, vocational, literary or artistic nature, and others which will later on help students choose a stream of studies which corresponds to their aptitudes and aspirations.

- Introducing optional learning orientations in grades 8 and 9 at the rate of 2 or 3 hours per week. Students will be required to choose one of the following fields :

    - Science and technology
    - Techniques and vocations
    - Natural Sciences
    - Arts and humanities
    - Languages and civilizations

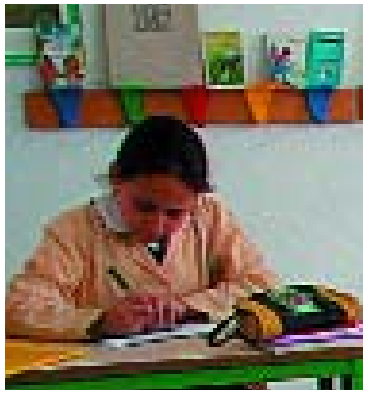
Students will be allowed to change their choice of orientation in grade 9.

The purpose of introducing optional learning orientations is to enable students to thoroughly study a given field of their own choice and prepare for a future orientation in a way that allows flexibility and the possibility of change to another orientation at a later date.

Special curricula are required for the development of optional learning orientations which represent integrative approach with interrelatedness between the subjects and knowledge, and which promotes the acquisition of transversal competences, and group work.

As for the “Technical and Vocational “domain, vocational training can be developed in the form of a partnership between junior high (preparatory) schools and vocational training centers.

- Flexibility through allocating some time (e.g. 1 hour per week) to remedial work in grades 8 and 9. This is to be done whenever the need arises, and will be organized through consultation between teachers, parents and students. This would be applied either to foreign languages or Science.



IV- 1-5. New learning options in secondary education

At present, secondary education offers 5 streams or sections that provide a general education. Three (Mathematics, Science, Technology) are mainly of a scientific nature, while others (Arts, Economics and Management) focus on humanities and languages. While the existing orientations are supposed to prepare students for specialization, they do not constitute a solid foundation for further studies after The Baccalaureate level. Moreover, they do not cater for students having interests other than in science or languages.

It is now necessary to strengthen the relationship between the training which students receive through different orientations in secondary education system and the orientation available in Higher Education. This must be undertaken in the context of a policy which allows for multi-specialisation and multi-domain universities, thus raising the output of both secondary and higher education institutions. This requires :

- distinction between the 2 streams at the secondary level.

- streams which prepare students for higher education which place an emphasis on general education through languages, Science and humanities.

- streams with multiple purposes which enable students to graduate with job-oriented compe tences as well as leave open possibilities for higher education.

- including in secondary education the basic prerequisites for higher education.

- development of curricula at the secondary level which prepares students for higher education in a way that ensures both specialization as well as preparation in a range of disciplines and fields. Following national consultations on schools of the future, the importance of variety in learning streams to guarantee choice for students and taking into account students differing aptitudes and interests, the structure of revised learning orientations and streams is as follows :

a) A revision of the structure of the present learning streams :

- A division of the Arts/literary section into 2 sections:

- Languages
- Humanities and social sciences.

- Combining the Experimental Science and Mathematics branches into one branch called "Basic Experimental Sciences."

- Restructuring the subjects of Economics and Management and revising the curricula.

- Creating a sports stream leading to a sports baccalaureate open to students belonging to a sports elite.

b) Creating new channels in two directions :

- a stream leading to a baccalaureate in Arts (music, plastic arts, drama)

- a set of streams leading to a baccalaureate in technology.

On account of the complementary mandates of the Ministry of Education and the Ministry of Vocational Training and Employment, this plan proposes:

- A specialized technology baccalaureate for the service sector in the educational system.

- A specialized technology baccalaureate for the industrial sector in the form of a partnership between the Ministry of Education and the Ministry of Vocational Training and Employment where the former will be responsible for general theoretical training and the latter for technological training in specialized centers and/or enterprises.

c) Revision of learning streams will be undertaken on the following basis:

- To give student in grades 8 and 9 the opportunity to take optional subjects related to fields which reflect the secondary education streams, thus enabling them to become acquainted with the different options available to give them a clearer vision of their potential educational path and make informed choices.

- Adopting a gradual orientation so that:

- The first year of secondary education will be devoted to a holistic set of learning objectives while embarking upon a process of more diversified training.

  - Devoting the second and third years to training within a set of educational fields: languages, humanities, social sciences, economics and management, basic experimental sciences and technology.
  - Devoting the 4th year to a more thorough training of 20%-30% in one of the streams followed in the second and third years.

- Seeking flexibility by giving another chance to students who wish to change streams.

- Ensuring a solid general education in all basic fields through a program of combined learning which will allow for changing streams while, at the same time, preparing students to specialise later on.

- The Arts and the sports streams come on line at the end of grade 9 and continue uninterrupted until the end of the 4th year. Students are allowed to change streams they wish.

IV- 1- 6 Setting up a system of periodic evaluation:

Over the last 10 years, many countries replaced the use of standardized tests for compulsory basic education and replaced them with continuous assessment. Tunisia has followed this international trend through the elimination of regional exams at the end of grade 6 and through adopting continuous assessment to measure preparedness for secondary education.

In doing so, it is necessary to :

Set up a national evaluation system that is solely for the purposes of certifying learning achievement, but more akin to a national oversight mechanism that monitors the level of attainment of agreed learning objectives

This type of evaluation consists of using standardized tests with a sample of the student population in basic education (languages, Maths, Science), conducted in grades 4, 6 and 8 and in the 2nd year of secondary education.

IV- 2- Media and communication technologies in teaching and learning

New media and communication technologies represent a strategic choice in the school of the future. Technology is considered one of the most important means of preparing new generations for the challenges of the future.

The use of the new media and communication technologies in schools aims to:

- Be used as a teaching aid to assist learners access various fields of knowledge;

- Enable learners to develop independence in the acquisition of new information, in terms of how and when they find it and the ways in which they choose to apply it;
- Familiarize learners with group work;
- Change the role of teachers from that of being the sole source for knowledge to that of a monitor helping students access knowledge from numerous sources;
- Provide variation in learning approaches by promoting distance teacher training in ways that promote the principle of lifelong learning.

To attain these objectives, the following plan has been devised :

- Integrating new media and communication technologies in learning;
- Providing education institutions with the necessary equipment;
- Training educators to master media and communication technologies and use them for teaching.
- Widening the educational network, improving its services and connecting it to education institutions;
- Setting up a sophisticated system of distance learning and training;
- Producing digital contents and educational software programmes.

IV- 2-1. Integrating information and communication technologies in teaching and learning

A strategy which incorporates the new technologies in the educational curricula has been set up for the purpose of helping students, at an early age, use them in their studies by searching for information, communicating more effectively and finding solutions to problems. Teachers will be provided with support and guidance to help them use new media and communication technologies in class for various subjects.

The strategy will be carried out within the context of school projects which delineate pedagogic goals, strategies, outcomes and means for evaluation.

IV- 2-2. Teacher training

The integration of media and communication technologies in teaching requires a change in teaching approaches and in teachers' attitudes. This requires continuous teacher training for a mastery of the new technologies and skills. A part of this training will be done through on-site training while some will be through distance learning and the use of 'virtual schools'.

There will be a consolidation of national and regional training programmes in computer use and the internet, to develop digital content and incorporate media and communication technologies in teaching and learning.

To encourage teachers and provide them with a means to communicate, exchange information, pedagogic experiences, didactic products and sources, networks have been created which involve teachers, academic supervisors for various subjects (e.g. Mathematics, Physics, Natural Sciences, French, English, etc.). This will be expanded to include other subjects and a larger number of educators.

IV- 2-3. Equipment

Introducing media and communication technologies requires a supply of computers to education institutes, as follows :

- Equipping all junior high schools and a pilot school in each primary school inspection constituency with computers by the end of 2002. All the primary schools should have computers by the end of 2005.

- Supporting the establishment of computer labs in secondary schools, equipping the science and technology labs, and teaching various subjects using computers. In the first phase there will be one lab per secondary school.

- Launching pilot projects for 'intelligent schools' with the intensive and comprehensive use of modern technology.

IV-2-4. Establishing an education network

The programme to connect educational institutions to the network shall be undertaken as follows:

- Improving high school connectivity through digital lines during 2002

- Connecting all junior high schools by end-2002.

- Connecting all primary schools between 2001-2005.

- Also, a number of measures have been taken to develop educational services

and facilitate the storage and diffusion of the digital information, including:

- providing the educators with accounts for accessing the internet to promote its use for improved teaching.
- helping develop websites for educational institutions, education networks and centers of cultural and scientific invention and creativity.
- facilitating access to educational resources and digital information via an educational virtual library.
- reducing reliance on administrative and school services carried out from a distance in order to improve student-and parent-oriented services and the establishment of a national scheme for communication administration.

IV- 2-5. Distance teaching and training

To set up a comprehensive distance educational and training system comprising all levels of education, the virtual school has become operational on an experimental basis in January 2002. Its scope and functions will be

broadened through expanding the number of leaders among students, parents and public in the following fields:

- teaching Arabic to the children of Tunisian expa triates';
- providing remedial instruction in all subjects at all levels;
- creating an open school to provide school leavers with opportunities to resume learning;
- creating a center for training educators in media and communication technologies.

IV- 2-6 Development of virtual units and education

Educational software represents one of the most important aspects of media technology in education today. The National Pedagogic Centre shall create a unit that will produce digital multimedia aids to support implementation of the national curricula and promote national culture. This unit shall be responsible for the production of :

- multi-media digital instructional materials for students across subjects,
- digital books to accompany textbooks,
- teacher training software.

IV- 2-7 Establishing an education data system

Within the framework of improving the administrative management methods, the Ministry of Education has started the establishment of a comprehensive integrated educational management information system that starts at the level of the school and gradually goes up to the regional and national levels. This allows for careful analysis of the educational system in terms of both quantity and quality and equips decision-makers with evaluation, conceptualization and planning tools.

To this end, the Ministry of Education has started carrying out the following projects :

- establishment of services at the school/institution level to assist :
  - enrolment operations, attendance, orientations, exams, administrative and pedagogic support;
  - management of human and material resources, facilities and equipment;
  - monitoring teachers' administrative and professional status;
  - managers of institutions for using quantity quality indicators of school attainment
- establishment of an education data bank to collect all local and regional data on students, teachers, administrators, pedagogic supervisors, facilities, equipment, results and other relevant information;
- establish an administrative network, inclu ding e-mail, the transfer of electronic files and distance data copying and transmittal;
- modernize administrative software for connectivity with regional and national data bases.

IV- 3- Supporting professionalism in teaching

Important changes in the education sector have brought about new roles for teachers and directions in the teaching profession. Current trends favour professionalism and solid teacher training at the onset of one's teaching career. In-service training is aligned with professional competences defined for each stage of education. This necessitates a longer period of initial study and basic training for teachers. In Europe, for example, initial primary teacher preparation lasts 3 to 5 years after the Baccalaureate, whereas preparation for secondary school teachers varies from 3 to 6 years. At present, the situation in Tunisia is as follows:

VI- 3-1 Basic training.

a./ Primary school teachers : Basic training is provided by Teacher Training Higher Schools. This training takes two academic years and graduates can teach only in the first cycle of Basic Education.

High school teachers : four years of basic training is provided in universities for specific subjects . After graduation, they are required to pass a test for employment called 'CAPES'. Upon passing this exam, teachers take a rapid job-oriented training course, which has been judged to be insufficient to adequately prepare them for teaching.

IV- 3-2 In-service training

a./ Primary school teachers : Primary school teachers receive two types of in-service training:

- Training leading to a degree allowing one to teach or be an inspector. This training is under the Higher Institute of Education and Training and offers greater chances for promotion. Many of its alumni are employees of the Ministry of Education.

- In-service training conducted by the Ministry of Education for retraining teachers and for developing their cognitive and professional capacities.

b./ Practicing high school teachers receive two kinds of training:

- Qualification for those who have not obtained the 'Maitrise' level qualification (i.e. Bachelor's degree). This training is conducted by the Higher Institute of Education and Continuous Training. Interest in this training has been decreasing over the last few years due to the fact that new recruitment is restricted to university graduates.

- In-service training is organized by the Ministry of Education in regional centers and in summer schools, often during school holidays. This training aims to maintain teachers' intellectual and

professional capacities, with a particular focus on encouraging pedagogic innovation.

Accordingly, the following decisions have been taken:

- The content of training for primary school teachers in university training institutes comes under the jurisdiction of the Ministry of Education, although the administration of these institutes is under the juridiction of the Ministry of Higher Education.
- Basic training for primary school teachers will be extended to three years instead of two and a system of 'alternating training' will be adopted.
- The Higher Institute of Education and Continuous Training will be responsible for one year of vocational and pedagogic training for newly-recruited teachers prior to taking up an initial teaching assignment.
- Teacher training is being extended by one year for more intensive practice teaching.
- Teacher training is being broadened to include a set of specializations instead of only one so as to meet the requirements of the new approaches based on inter- and intra-subject integration of knowledge.

IV- 4. School as the basic unit in system

Schools are not only a place where students go to learn and acquire knowledge, but are also places where they develop values which shape their personalities and behaviour. These values are reflected in the curricula , the ways educational institutions are managed and through the nature of relations between different parts of an institution and education system.

IV- 4.1 School improvement projects

Schools cannot adequately fulfil their functions in a system so centralized that initiative and innovation are stifled. The structure of an education system can be made more flexible by turning schools into independent pedagogic entities that work toward general objectives of

the educational system within the public domain. Only then can schools have the conditions to undertake special projects which account for the specificities and features of their own environments.

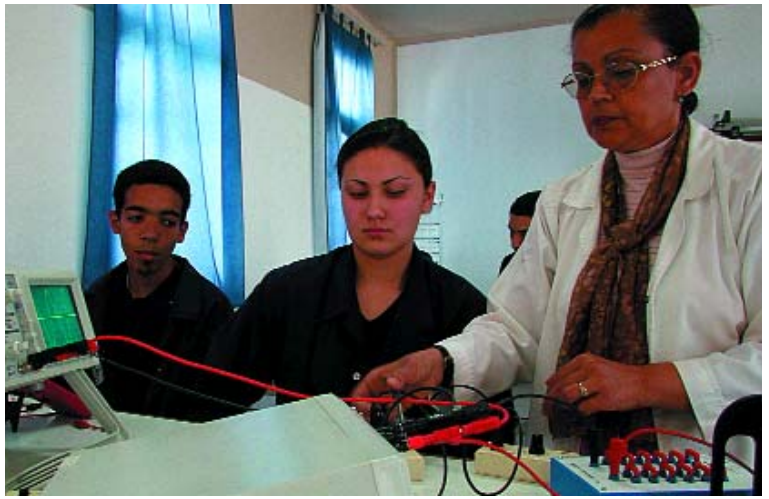
In essence, school projects represent an activation and harmonization of all components of educational institutions and between the various parties involved in them.

To achieve national education goals, educational institutions at all levels are called upon to agree with people in the local area and in the national community to :

- Reach an agreement among all parties involved in the educational institution enlisting their involvement. Based on this agreement, the work of the institution will be evaluated
- Involve all the parties concerned in the development, implementation and evaluation of the school project.
- Motivate people to contribute to its success.

IV- 4.2 Improving school life in high schools.

Upon reaching the second cycle of basic education and secondary education, students will



have passed the second childhood stage and entered an important stage in their growth.

Despite schools' success in meeting educational goals, some students' face problems as a result of the physical and psychological changes related to adolescence. Others have difficulty establishing positive relationships in and outside school.

To improve relations in educational institutions and provide learners with psychological and social support to help them overcome difficulties related to adolescence, the Ministry of Education has established counseling offices in a number of junior and high schools. These offices are visited by students who feel the need to discuss their problems in a supportive atmosphere. Specialists listen to students and try to facilitate communication betwen school and the outside environment. Counselling

offices contribute to protecting teenagers from health problems and misbehaviour, cope with school failure and improve schools' general atmosphere.

IV- 4.3 Improving school life in primary schools.

School administration in the first cycle of basic education is the responsibility of the headteachers. He/she is a teacher in charge of a number of academic, administrative and public relation tasks on a full-time or part-time secondment according to the number of classes in the school.

It has become apparent that a considerable number of headteachers cannot fulfil their academic and public relations responsibilities satisfactorily due to their teaching commitments. This has had a negative impact on the training of teachers, the organization of school life and the connection of school with the environment. Measures to address this include:

Consolidating the headteacher's academic role by granting him/her a full-time or a part-time secondment from teaching through revision of the present secondment criteria.

- Appointing an assistant to the headteacher in every primary school that has more than 14 classes.

- To guarantee continuous and uninterrupted teaching, additional teachers shall be put at the disposal of the inspectorates to replace absent teachers, particularly those absent for long periods of time.

IV- 5. Supporting equal opportunity and equity.

IV- 5.1 Assisting priority schools

In addition to the measures already taken during the 2000 – 2001 academic year, including the allocation of extra funds for the construction of multi-purpose classrooms and the supply of education equipment and supplies, the Ministry will devote a certain number of overtime hours (10 hours per school on average) to organizing remedial lessons for the benefit of students with learning problems.

IV- 5.2 Introduction of preschool education

Full generalization of a preparatory year will be in place at the start of the 2006 – 2007 academic year for all 5-year old children. This will be done with the contribution of education authorities, local communities, public associations and the private sector. The Ministry's intervention will focus on priority schools and non-municipal zones where private sector participation is less likely.

VI- 5.3 Children with special needs

To support the idea of "school for all where all have equal chances" , a plan will be carried out to integrate those with special needs. This includes:

- Increasing the education system's ability to integrate children with special needs by adopting approaches more suitable to their learning requirements (special assistance, technical support and health care, etc.).
- Identifying and diagnosing handicaps; parent counseling and guidance,
- Media and communication strategies to change attitudes and behaviors of all the parties in the education system in favor of integrating handicapped children in schools.

IV- 6. Modernizing the education system to improve its performance and capacity to meet society's needs

Improving the performance of the educational system and its outputs depends on a number of factors and variables, some of which are pedagogical, organizational, managerial and informative. An education system is a complex network of interdependent relations (human material, legal or red tape ones) interacting with one another. In order to make the components of an education system more effective, one has to:

- Support decentralization and encourage creativity in all fields and at the levels of the educational system
- Open the educational system to modernity by incorporating new technologies for teaching, training and management, and strengthening research and evaluation processes.
- Improve management of the education system:

a./ Retrain education personnel through conti nuous training programmes.

b./ Provide the local authorities with human and material resources.

c./ Generalize the use of computers in education administration at the national and regional levels.

d./ Revise the structure of the information system within the Ministry and establish inter-connectivity.

Execution Stages of the strategy specific to the curricula

V- Execution Stages of the strategy

V- 1- short term: September 2002

- Revision of all the curricula of the first two stages (years 1-2-3-4) in first cycle of Basic Education in-line with the competency-based approach

- Development of textbooks for pupils in grades 1-3 of Basic Education in–line with new syllabi and the competency-based approach

In addition to a students' book, development of a student's workbook in Arabic for students in grades 1 and 2, and in French for grade 3. Children do not have sufficient opportunities to write and copy at the initial stage of learning. It has been noted that the lack of a special workbook impedes teaching as primary school teachers waste time writing on the board or using handouts.

- Development of teachers reference documents corresponding to the new syllabi.
- Development of of a new Maths textbook for grade 7 to ensure a better transition from grade 6

V- 2 - medium term : September 2003

- Introduction of Physics in the second cycle of Basic Education and development of a syllabus, textbooks and equipment. This will be done gradually from grade 7 to 9
- Creation of an Arts Bac in Music, Plastic arts and Drama, following the example of the Sports Bac which has been created this year (2001-2002)

V- 3 - long term : September 2002-2007

- Revision of school timing, orientations and subjects
- Setting standards for each level according to international norms
- Establishing the competences required for entering active life and pursuing studies in secondary education, and in areas of Vocational Education and Higher Education
- Establishing Secondary Education Sections, flows between the different branches, and determining timing for school orientation
- Development of remaining curricula in the first cycle of Basic Education , and related textbooks/teaching aids.
- Development of curricula for the second cycle of Basic Education according to the requirements of the competency-based approach, and development of related textbooks/teaching aids.
- Development of the curricula of Secondary Education, and related textbooks/teaching aids.

Agenda of application of the proposed measures

Date of application	Measures
September 2002	- Adoption of a time chart for years 1 and 2 of Basic Education
September 2003	- Adoption of the new time chart in years 3 and 4 of Basic Education - Generalization of the English clubs in year 5 - Introduction of physics in year 7 of Basic Education - Beginning of application of diversified education with the introduction of optional learnings in year 8
September 2004	- Adoption of the new time chart in years 5 and 6 of Basic Education - Generalization of the English clubs in year 6 - Introduction of physics in year 7 of Basic Education - Beginning of application of diversified education with the introduction of optional learnings in year 9
September 2005	- Adoption of the new time chart in year 7 of Basic Education - Introduction of physics in year 9
September 2006	- Adoption of the new time chart in year 8 - Beginning of application of the remedial hour in basic learnings in year 8
September 2007	- Adoption of the new time chart in year 9 - Beginning of application of the remedial hour in the basic learnings of year 9 of Basic Education

Developing the curricula of all subjects at all the stages of education.
Timetable

	Actions	Deadlines	Intervening parties	Beginning of application
1	***Evaluation and comparison*** - Comparative study of subject time chart -Comparative study of curriculum contents	End of December 2001		
2	- Revision of the time chart of learning fields and subjects	April 2002		
3	- Determining the required standards	June 2002		
4	- Training specialized staff in curriculum development, textbook and materials production	October November December 2002		

	Actions	Deadlines	Intervening parties	Beginning of application
5	- Elaboration of the curricula of the first cycle of Basic Education and elaboration of textbooks and teaching aids - Final edition of curricula of stage 2	From January to May 2003		
	-Elaboration of the textbooks and teaching aids of year 4 and validation of textbooks of years 1-2-3 Basic Education	From December 2002 to May 2003		
	-Elaboration of the curricula of stage 3	From September to December 2003		
	-Elaboration of textbooks and teaching aids of year 5	From December 2003 to May 2004		
	-Elaboration of textbooks and teaching aids of year 6	From May 2004 to February 2005		
	-Validation of textbooks and teaching aids of stage 2	From March to May 2005		
	-Validation of textbooks and teaching aids of stage 3	From January to March 2006		

	Actions	Deadlines	Intervening parties	Beginning of application
6	- Elaboration of curricula of cycle 2 of Basic Education and elaboration of related textbooks and teaching aids -Determining the required competences for pursuing studies in the secondary and vocational education.	June 2002		
	- Elaboration of curricula of grade 4	The whole 2003 year		
	- Elaboration of textbooks and teaching aids of year 7 - Elaboration of text books and teaching aids of year 8	From September 2003 to March2004		September 2004 September 2005
	Elaboration of textbooks and teaching aids of year 9	From March to December 2004		September 2006
	- Validation of textbooks of years 7 and 8 - Validation of textbooks of year 9	From January 2005 to December 2005		
	Elaboration of the curricula of secondary education - Determining the required competences to pursue studies in Higher Education	June 2002	Joint commission: Ministry of education/ Ministry of Higher Education	
	Elaboration of the curricula of the first cycle of secondary education	The whole of 2003		
	Elaboration of textbooks and teaching aids of the first cycle of secondary education			

	Actions	Deadlines	Intervening parties	Beginning of application
	Elaboration of curricula of the sections of the second cycle of secondary education	The whole of 2003		
7	Elaboration of textbooks and teaching aids of years 2 and 3 of secondary education	From March to December 2004		
	Elaboration of textbooks and teaching aids of years 3 and/or 4 of secondary education	From January to December 2005		September 2005 and September 2006

Enclosure

Table 1
comparative data on the structure of the educational systems

Pedagogic Training during basic studies			Number of years of basic studies for teachers			Age/ School orientation	Rate of student distribution in general education and vocational education				Number of schooling years in the different Stages: Secondary			Number of years / Compulsory education	Schooling age	Countries
							In secondary school		In junior high school		Secondary school	Junior high school	primary			
Secondary	Junior high school	primary	Secondary school teaching	Junior high school	Primary school		Vocational education	General education	Vocational education	General education						
yes	yes	yes	5-4	3	3	12	70	30	27	73	4	2	6	9	6	Belgium
yes	yes	yes	5	4	4	16	52	48	0	100	3	3/2	7	9	7	Denmark
yes	yes	yes	5-3	5-3	2	10	76	24	0	100	3	6	4	10	6	Germany
yes	yes	yes	5-4	5-4	4	16	30	70	0	100	3	3	6	9	6	Greece
yes	yes	yes	5-4	5-4	3	16	30	70	0	100	2	4	6	10	6	Spain
yes	yes	yes	4	4-3	4-3	15	55	45	6	94	3	4	5	10	6	France
yes	yes	yes	6-4	6-4	4	14	72	28	0	100	5	3	5	8	6	Italy
yes	yes	yes	5-4	5-4	3	10	68	32	67	33	4	3	9	11	6	Luxemburg
yes	yes	yes	5	4	4	12	68	32	18	82	3	3	6	11	4	Holland
yes	yes	yes	4.5	3	3	10	75	25	0	100	4	4	4	9	6	Autriche
yes	yes	yes	6-5	6-5	4-3	15	26	74	0	100	3	9		9	6	Portugal
yes	yes	yes	from 3 to 6			16	55	45	0	100	3	3	6	9	7	Finland
yes	yes	yes	5.5-4	4.5	3.5	16	53	47	0	100	3	9		9	7	Sweden
yes	yes	yes	From 3 to 4			15	58	42	0	100	4	3	6	11	5	England Wales
			4.6	4.3	3.5	13.8	56.3	43.7	6.4	91.5	3.3	*3.3	*5.7	9.5	5	* Average European union
no	no	yes	4	4	2	17	0	100	0	100	4	3	6	9	6	Tunisia

* Without including Portugal and Sweden

Table 2
Annual time distribution per subject (age :7)

Subjects / Countries			Maths		Sciences		Foreign languages		Physical education		Artistic activities				Time freely managed by the teacher		Total
Belgium	32%	272	18%	155	13%	110			7%	59	16%	136	7%	59	7%	59	848
Denmark	46%	270	20%	120	5%	30			5%	30	10%	60	10%	60	6%	30	600
Germany	26%	152	22%	154	13%	80			12%	76	17%	102	9%	58	2%	13	615
Greece	36%	236	20%	151	13%	83			8%	62	16%	106	5%	32	4%	28	526
Spain	22%	175	11%	87	11%	87			9%	70	9%	70	8%	62	33%	259	810
France	36%	293	19%	165	15%	130			11%	98	11%	98			8%	68	848
Italy	13%	121	10%	90	17%	148	10%	90	7%	60	13%	119	7%	60	23%	211	900
Luxembourg	4%	34	20%	187	10%	92	27%	251	10%	92	10%	92	10%	92	10%	92	936
Holland															100%	980	980
Autriche	33%	210	19%	120	14%	90			10%	60	14%	90	10%	60			630
Portugal															100%	748	748
Finland	24%	152	17%	105	14%	88	6%	38	9%	57	15%	95	6%	38	9%	57	628
Sweden															100%		
England Wales															100%	836	836
European Union average	25%	191.9	17%	129.4	12%	88.7			9%	65.9	13%	98.7	7%	56.3	39%	277.2	786
Tunisia	51%	378	18%	131	11%	79			4%	25	7%	49	8%	58			*736

* The total is computed on the basis of 196 days per year with a daily average of 4 hours 30minutes and 5 days a week.

Table 3
annual time distribution per subject (age : 10)

Subjects / Countries			Maths		Sciences		Foreign languages		Physical education		Artistic activities		Religious Education		Time freely manifged by the teacher		Total
Belgium	25%	212	18%	152	23%	196			7%	61	11%	91	7%	61	9%	76	848
Denmark	23%	180	15%	120	12%	90	8%	60	12%	90	23%	180	4%	30	4%	30	780
Germany	23%	164	19%	135	17%	120			11%	81	18%	130	8%	60	4%	23	713
Greece	28%	211	14%	105	24%	184	10%	79	7%	52	7%	52	7%	52	3%	25	781
Spain	17%	135	11%	85	11%	85	11%	85	8%	63	8%	63	8%	63	32%	258	810
France	35%	293	21%	179	15%	130			10%	89	10%	89			8%	65	845
Italy	13%	121	10%	90	17%	149	10%	90	7%	60	13%	119	7%	60	23%	211	900
Luxembourg	3%	29	17%	159	10%	93	40%	374	10%	93	10%	93	10%	93			936
Holland															100%	1000	1000
Autriche	28%	210	16%	120	12%	90	4%	30	12%	90	20%	150	8%	60			750
Portugal	17%	145	13%	116	20%	175	13%	116	7%	58	27%	233	3%	29			876
Finland	24%	152	17%	105	14%	86	6%	38	9%	57	15%	95	6%	38	9%	57	628
Sweden															100%		
England Wales															100%	912	912
European Union average	20%	169	15%	124	15%	127	13%	104	9%	71	14%	117	7%	54	32%	266	828
Tunisia	23%	229	13%	130	15%	147	38%	375	4%	33	4%	33	4%	33			*980

* The total is computed on the basis of 196 days per year with a daily average of 5 hours and 6 days a week.

Table 4
annual allocation of timing (age : 13)

Subjects / Countries			Maths		Sciences		Humanities		Foreign activities		Physical Education		Artistic languages		Civic and religious education		Obligatory option		Time freely managed by the teacher		Miscellaneous learnings		Total
Belgium	152	18%	152	18%	61	7%	121	14%	121	14%	91	11%	30	4%			121	14%					849
Denmark	180	20%	120	13%	230	25%	230	25%	180	20%	60	7%	90	10%							30	3%	900
Germany	114	13%	114	13%	115	13%	106	12%	210	24%	74	8%	66	8%					75	9%			874
Greece	105	11%	105	11%	75	9%	105	11%	131	14%	75	9%	65	6%							266	29%	923
Spain	105	12%	70	8%	70	8%	70	8%	105	12%	35	4%	70	8%					226	26%	115	13%	866
France	150	16%	135	15%	119	13%	119	13%	105	11%	105	11%	65	7%	65	7%	65	7%					935
Italy	167	20%	50	10%	50	10%	166	17%	50	10%	65	7%	124	13%							124	13%	933
Luxemburg			50	10%	30	3%	50	10%	400	53%	60	7%	50	10%							60	7%	900
Holland	111	10%	111	10%	89	8%	144	14%	144	14%	100	9%	70	7%	6	.	225	22%			50	5%	1047
Autriche	130	12%	105	10%	100	10%	120	12%	90	9%	90	9%	90	9%							165	16%	1020
Portugal	117	13%	117	13%	117	13%	175	20%	87	10%	60	7%	87	10%			87	10%			29	3%	874
Finland	76	9%	86	10%	124	14%	87	7%	123	16%	57	7%	29	3%			150	22%			105	12%	857
Sweden																			807	100%			807
England Wales																			950	100%			950
European Union average	129	14%	113	13%	100	11%	115	13%	156	17%	72	15%	73	8%	37	4%	140	15%	514	86%	105	12%	911
Tunisia	120	17%	111	12%	88	10%	166	20%	194	23%	85	10%	85	7%									850*

* The total is computed on the basis of 166 days per year(after subtracting the days devoted to assessment and exams) with an average of 5 hours a day and 6 days a week..

Table 5
aannual distribution per subject (age : 16)

Subjects / Countries	Langue nationale		Maths		Sciences		Humanities		Foreign languages		Physical Education		Artistic activities		Obligatory option		Time freely managed by the teacher		Miscellaneous learnings		Total
Belgium	152	18%	121	14%	152	18%	91	11%	182	21%	61	7%			30	4%			61	7%	850
Denmark	90	10%	120	13%	270	29%	90	10%	210	23%	60	6%	90	10%							930
Germany															282	33%	564	67%			846
Greece	105	13%	131	17%	184	23%	53	7%	53	7%	39	5%							223	28%	788
Spain	105	11%	70	8%	140	15%	70	8%	105	11%	18	2%			70	8%	318	34%	35	4%	931
France	132	14%	198	21%	231	24%	99	10%	99	10%	66	7%			99	10%	33	3%			957
Italy	133	14%	100	11%	167	18%	134	14%	100	11%	67	7%	67	7%					165	18%	933
Luxemburg			120	13%	150	17%	90	10%	420	47%	30	3%	30	3%	30	3%			30	3%	900
Holland	100	10%					22	2%	89	9%	33	3%	22	2%							1000
Autriche	90	9%	120	11%	210	20%	180	17%	180	17%	60	6%	60	6%	734	73%			60	6%	1050
Portugal	80	10%	107	13%	213	27%	80	10%	80	10%	53	7%			90	9%			187	23%	800
Finland																	812	100%			812
Sweden																	712	100%			712
England Wales																	950	100%			950
European Union average	110	12%	120	13%	191	21%	91	10%	152	17%	49	6%	54	6%	190	21%	565	63%	109	12%	890
Tunisia	124	15%	111	14%	180	22%	166	20%	180	22%	55	7%									*816

* The total is computed on the basis of 166 days per year(after subtracting the days devoted to assessment and exams) and 29 hours and 30 minutes a week.

Table 6
Distribution of Baccalaureate holders per field (The June 2001 session)

	Humanities & Arts		Maths		Experimental Sciences		Technical Sciences		Economics and management	
	number	%	number	%	number	%	number	%	number	%
Basic Sciences	30	0.2	2543	22.1	3316	24.1	734	11.8	4	0.1
Arts and Humanities	9811	69.3	552	4.8	1006	7.3	380	6.1	1053	14.0
Medical Sciences	261	1.8	531	4.6	1550	11.3	40	0.6	28	0.4
Law, Economics Management	3352	23.7	3824	33.2	5097	37.0	365	5.9	5874	78.1
Technical Sciences	74	0.5	3852	33.5	1821	13.2	4591	73.5	412	5.5
Teacher training schools	633	4.5	23	0.2	149	1.1	47	0.8	112	1.5
Agricultural Sciences	0	0	184	1.6	826	6.0	78	1.3	27	0.4
Total	14161	100	11509	100	13765	100	6235	100	7510	100

Table 7
percentage of the time allocated to the teaching of Maths in the TIMSS 99 group.

	4th year Basic Education	6th year Basic Education	8th year Basic Education
Australia	18	18	15
Belgium	18	18	15
Bulgaria	16	13	13
Canada	15	15	15
Chili	17	17	17
N. China	12	18	11
Cyprus	17	17	9
The Czech Republic	20	15	13
England			
Finland	16	18	10
Hong Kong	15	15	15
Hungaria			
Indonesia	14	14	14
Iran	14	14	11
Israel	15	14	13
Italy		10-15	10-15
Japan	17	17	13
Jordan	18	15	13
S. Korea	14	13	12
Latvia	20	16	16
Lithuania	17-22	14-17	13
Macedonia	20	17	13
Malaysia	20	20	13
The Maldives	17	17	18
Morocco	15	15	20
Holland			10
New Zealand			
The Philippines	12	11	10
Romania	17	17	15
Russia	18	17	15
Singapore	22	20	15
Slovakia			
Slovenia	23	16	16
South Africa			
Thailand	8	8	8
Turkey	13	13	13
USA			
Tunisia	15	15	16

Table 8
percentage of the time allocated to the teaching of Sciences in the 99 TIMSS group

	4th year Basic Education	6th year Basic Education	8th year Basic Education
Australia			
Belgium	12-15	1812 -15	12-15
Bulgaria	8	20	26
Canada	9-12	12-15	12-15
Chilli			
N. China	12	11	11
Cyprus	6	6	14
The Czek Republic	13	22	13
England			
Finland	11	11	14
Hong Kong	6-8	6-8	8-13
Hungaria	17	20	25
Indonesia	14	14	14
Iran	11	13	11
Israel	7-10	10-13	14-16
Italy		5-10	5-10
Japan	10	10	10
Jordan	12	12	15
S. Korea	11	13	12
Latvia	5	6	19
Lithuania	9	14	23
Macedonia		10	25
Malaysia	8	8	11
The Maldives	30	30	32
Morocco	6	6	12
Holland			18
New Zealand			
The Philippines	12	11	20
Romania	7	21	25
Russia	5	14	25
Singapore	8	10	15
Slovakia			
Slovenia	14	15	27
South Africa			
Thailand	6	6	9
Turkey	10	10	10
USA			
Tunisia	5	5	8