A SURVEY OF GEOGRAPHY TEACHING IN ALGERIAN SECONDARY EDUCATION

BY

ABDELHAMID BELOUCIF

A THESIS SUBMITTED FOR THE DEGREE OF MASTER OF LETTERS

UNIVERSITY OF GLASGOW
FACULTY OF SOCIAL SCIENCES
DEPARTMENT OF GEOGRAPHY AND TOPOGRAPHIC SCIENCE

FEBRUARY, 1991

Dedication

To my parents, Ali and Khadra

To my wife Bahria and my children

To everyone who likes to help pupils

ACKNOWLEDGEMENTS

I would like to express my deepest gratitude and indebtedness to my supervisor, Professor I B Thompson, of the Department of Geography and Topographic Science for his support, encouragement and critical comment. I would also like to thank Professor N Grant of the Department of Education and to his colleagues Mr H M Paterson and Dr David Hamilton.

In Algeria I am grateful for the help received from Djammoua Mechri, Chief Inspector of Social Sciences in Algeria and to Bakhti Moussa, Deputy Director of Training in the Ministry of Education. I would also like to thank M Zeghouai, Director of the CNEG and M Mazghanna, Director of Education in Algiers for his assistance in gaining data from schools. Mr Ben Abderrahman, Head Master of El Arkam, Mr Saadi, Headmaster of Akba, M Arazki, Headmaster of El Moukrani and M Larachich, Head Master of El Amir were all very helpful at the questionnaire stage. I am also deeply grateful to the Director of Planning and Statistics in the Ministry of Education and to Dr Youcef Ahmed Said for his useful advice.

The experimental work in this Thesis was completed with the help of the following teachers; Boudiab Larbi, Zaidi

Mohamed, Bachir Sadouni, Salah Salah and Hania Youcef. My data gathering in Fundamental Schools was aided by Boulahbal Abdel Karim and Bahri Ammar, Inspectors.

I wish to offer heartfelt thanks to my mother, wife, brothers and children for their encouragement and support. To Rabah and Brahim Beloucif my thanks for caring for my children during the period of my study.

I am grateful to Miss Barbara Currie for her typing and I am grateful to the Algerian Government for financial support.

Abdelhamid Beloucif

Table of Contents

Appendices

List of Tables

List of Figures

ABSTRACT

This study endeavours to investigate the status of Geography teaching in Algerian Secondary Schools. Emphasis is placed on the low performance in the subject and the effect this has on both teachers and pupils.

To establish the factual position samples of 200 third year pupils and 100 teachers completed a questionnaire. In addition, 500 pupils, in different schools completed an experiment related to the Baccalaureat examination. Five schools, in different areas of Algiers were sampled with respect to the availability and use of teaching materials. An examination was made in the Ministry of Education of teachers qualifications and a seminar was held in Algiers with a group of geography teachers to evaluate the overall results of the research.

The thesis consists of chapters devoted to the background to the problems, a description of the methodology used, a review of the effects of educational policy, the human resources available and the physical materials available in schools. The conclusion includes recommendations for future improvements.

INTRODUCTION

Algeria endured colonisation by France from 1830 until 1962. During this period, Secondary Education was modelled essentially on the French national system, the teachers were French and few native Algerians received more than elementary education. Similarly the universities and teacher training institutions followed French curricula and the language of instruction was exclusively French. Participation rates in education were very low on the part of Algerian children, usually restricted to Koranic schools, and in the case of girls, very little education was available. At the eve of Independence, a very low proportion of Algerians had received formal education and a very high proportion were illiterate in both French and the national language, Arabic. The mass exodus of French population in 1962 posed an enormous problem in organising and staffing the educational system and in particular a reliance on "coopérants" from France, from socialist countries and from Arabic-speaking countries. The problem was aggravated by the huge demographic increase and by the determination that education should be available to the entire population, thus posing enormous problems of manpower, buildings and teaching materials. Nearly thirty years later, Algeria still faces critical problems in its educational system, in spite of much effort, legislation and development programmes.

This thesis attempts to investigate developments in one sector, Secondary Education, and in a particular discipline, Geography, in which the author has long experience as a practicing teacher. In addition to drawing on experience large samples of pupils and teachers were interviewed on a questionnaire basis, five schools in Algiers were visited for observation and to assess the use of materials. An analysis of teacher's qualifications was made and finally a seminar with teachers was organised in Algiers to confirm the research results.

The thesis is divided into six sections. Chapter One is a general background to the current position of Secondary Education. Chapter Two describes the methodology employed in the research. Chapter Three examines in detail the reform of Secondary Education in recent years and how this has affected Geography Teaching. Chapter Four considers the supply of resources in terms of quantity and quality of teachers and Chapter Five repeats this exercise for physical resources of books and teaching materials. This leads to a concluding chapter which aims to suggest realistic proposals to reduce the acute problems that this thesis reveals.

The study of Geography has a key role to play in a newly independent and developing country. In particular it has a responsibility to develop pupil's awareness of their own

country, its environment, society and external relationships. Moreover, Geography's role in the curriculum is to prepare future citizens to know conditions in the world and to help them to think about political and social problems in the outside world. Teachers form the most dynamic element in this educational process and thus it is important for them to be aware of the goals of their curriculum programme and of the methods to be used to achieve these goals. This should involve guiding pupils to discover for themselves some of the basic methods of geographical learning. This implies the use of texts, statistics, maps, pictures, audio visual aids and field work. This makes Geography an exceptional subject in Algeria and the absence of such teaching materials lessens pupils' interest in the subject. Moreover, many teachers in Secondary Education do not have formal qualification in Geography. Whereas this leads many students to lack any interest in the subject, in those schools with qualified teachers and reasonable materials pupil interest is high. The exclusion of Geography in the Science stream of Baccalauréat also acts as a disincentive to serious study. The failure of the Secondary syllabus, which is still very traditional and to some extent overlaps with the elementary (Fundamental) school curriculum, to evolve in a modern way is a further disincentive. Many teachers are uncertain of their educational goals and are incapable of knowing if they are achieving their aims. This is particularly serious as Algerian society has radically changed in the

last twenty years but this is not reflected in the syllabus or in the teaching materials available.

The general objectives of this study are to define how far Geography can be made relevant to the educational needs of pupils, how an appropriate curriculum can be designed and what teaching materials are necessary to achieve these aims. Stress is placed on the importance of geographical understanding for the benefit of future citizens. An attempt is made to explain the very poor examination performance and how this can be improved by changes in the examination system. An analysis will be made of the syllabus content, its relationship to previous work in the Fundamental Schools and improvements that can be made in teaching methods. The emphasis throughout the thesis is practical and empirical rather than theoretical. This thesis is the first attempted in Algeria concerning Secondary Education in Geography and therefore there is a total lack of previous literature to refer to. The main originality of the work consists of the gathering of raw data by fieldwork, observation, questionnaire, structured interviews and the organisation of a teacher's seminar, in an attempt to elucidate the scale and nature of problems, leading to concluding proposals for consideration by the relevant authorities.

In large measure, this study draws on the author's personal

experience. He has taught in Primary schools for five years and in Middle school for a further five years and in Secondary Schools for eight years. After nomination as a Headmaster he was detached to the National Committee of Research in Geography for two years. The author has thus witnessed declining standards in Geography as expressed by increasing failure rates in Baccalauréat, the lack of interest shown by pupils and the reliance on teachers without qualification. However, the most serious problems concerned the failure to revise the content of the curriculum at Secondary level and the insufficient lesson time available to cover the syllabus adequately. Problems were aggravated by the shortage of appropriate teaching materials and the consequent reliance on formal memorising methods.

Consequently the main objectives of this thesis are to answer a series of questions as follows:

1) Does Secondary Geography teaching achieve the objectives defined by the Ministry and the extent to which pupils are aware of the achievement expected of them?
2) Does the syllabus reflect Algerian interests for its future citizens and are these aims and goals clearly understood by the teachers?
3) Are Secondary teachers of Geography adequately trained to achieve the objectives of the curriculum imposed by the Ministry?

4) Are the Inspectors qualified to assess teachers, to evaluate the programme and to help teachers to improve both their methods and use of teaching materials?

5) To assess the material resources available to teachers and their usage in the classroom.

It should be taken into account that this study has been carried out against many serious difficulties. These include teacher's strikes when the author was attempting to conduct fieldwork, a certain amount of suspicion and reserve of teachers with respect to classroom observation, bureaucratic difficulties in gaining access to official data, an absence of previous published research and difficulties in organising a seminar of Geography teachers which in many respects was crucial to confirming the author's findings.

CHAPTER ONE

THE BACKGROUND TO PROBLEMS OF TEACHING GEOGRAPHY IN ALGERIAN SECONDARY SCHOOLS

1.1. Introduction

It is impossible to analyse problems of teaching a particular subject without reference to the institutional, political and social background of the educational system of Algeria. For some time, secondary teaching has concerned both teachers and educationalists generally because schools were behaving as a closed system, insensitive to rapid changes in the nation as a whole. Demographic trends have forced schools to expand rapidly and this has had repercussions on teaching methods and materials in the attempt to meet national needs. Consequently there is an urgent need for an evaluation of teaching in order to assess the effectiveness of instruction, to establish instructional goals, to provide feedback to teachers and to provide objective information so that decisions can be taken on such matters as student progress and curriculum changes. Looked at as a systems approach, evaluation should provide continuous feedback to keep the system in balance and

adjusted to meet rapid changes in society and national priorities.

In spite of the importance of the evaluation process as a means of improving the performance of teachers and pupils, the national educational authorities have taken little action. It may be recognised that the system was created in a period of great difficulty in post-independence Algeria. However it should now be possible to have clear objectives in the system and in the curriculum in particular, especially in the light of the increasing pupil failure rate. In spite of this, no great attention has been paid to an evaluation of secondary education by the Ministry or even by the Inspectors in their annual reports, even though the large number of failures in final years and Baccalauréat examinations indicates the existence of major problems. The end result is a lack of confidence in the educational system by both parents and pupils, especially due to the lack of any published information about educational objectives. There is a widespread demand for an evaluation of the teaching systems, including curriculum, examinations and the provision of teaching materials. There is an obligation on teachers to respond to this concern in the community generally. Therefore,

improvements should be based on experience, rational analysis and realistic appraisal rather than subjective judgements. The case may be cited of the Fundamental Schools established in 1976 as a political judgement by administrators without consultation with teachers and without regard to the skill, knowledge and ability of existing teachers or the availability of teaching materials. The new programme for Fundamental Schools was applied suddenly without any prior information to teachers or even Inspectors. The reform was seen as a revolution in the educational system by the ministerial authorities, whereas teachers and inspectors saw it as being impossible to implement in the light of the absence of sufficient skilled teachers and class room materials. Thus a reform which may have been good in its general objectives was unrealistic in relation to the reality of insufficient skilled teachers to achieve the aims of the programmes. Similarly, the refresher courses organised for teachers during the summer holidays have not been helpful. They were intended to change methods from being exclusively based on the classroom to more emphasis on practical work and field studies, strengthening pupils knowledge of cause and effect in the real world, encouraging a scientific way of thinking and to prepare pupils to become active participants in society.

This ignored the realities in Algeria in general and from one region to another in terms of the lack of materials with which to carry out these changes in teaching methods.

In the past, teachers have been inadequately consulted, resulting in instability in the whole educational system. Teachers are the most dynamic element in the system and consultation is necessary to test the feasibility of new proposals, evaluate the competence of the teaching profession and to gain feedback from pupils. In practice, teachers are excluded from curriculum development and from expressing an opinion on pupils ability to react to changes. Teachers are thus not able to explain and justify their teaching practice because their key role in the educational system has been ignored even though they are the most sensitive to pupil's needs.

It is important that any evaluation of the system of education should examine not only the level of success and achievement but also the attitude to learning and to social life in general. The 1984 education reform in secondary schools did not evaluate these two factors. Even the 1989 National Education Committee, which was given the task of reconstructing the educational system in Algeria did not take into account previous small scale evaluations. This

has led to a lack of integration between the reforms in the Fundamental Schools and teaching and learning in the secondary schools. It should be stressed that the 1980 reform of Fundamental Schools involved considerable changes in content and teaching methods whereas changes in secondary schools, especially in the Social Sciences, are still being discussed. The 1989 National Committee report was seen by teachers as a generalised description rather than a basic evaluation of the system as a whole. It ignored previous studies concerning pupil's performance, which highlighted points of weakness, thus losing the advantage of the continuous feedback necessary to maintain the effectiveness of the system in general.

As a consequence, the Algerian school teachers began a strike in March 1990 in protest against the lack of consultation by the National Education Committee. Teachers were not invited to participate as members of the committee which consisted entirely of Administrators who ignored many aspects of teaching and learning needs. Their judgements were political rather than educational.

Having introduced this chapter by referring to the lack of rigorous evaluation of the system and of teacher consultation

we may now review the evolution of Algerian educational policy in more detail.

1.2. The Algerian Education Policy

Educational policy in Algeria was defined by the ordinance of 16 April 1976[1] which stated three national objectives. The system should apply to the nation as a whole, it should be based on democratic principles and it should be based on a modern and scientific content. These objectives would be expressed by Arabic as the language of instruction. Secondly, the objective was to improve standards throughout the nation. Thirdly, the national component was intended to promote the conservation of the national identity and history and to develop awareness of the national culture. It was intended that all teachers and administrators should be Algerian nationals.

The democratic element involved ensuring that education should be available to all on an equal basis and that education should promote national unity. The modern and scientific approach implied that teaching should be designed to promote high technology as a means to social development. In turn this implied that the national language, Arabic,

should be improved to come to terms with scientific and technological contents. Finally, the educational system should include both theoretical and practical elements, so as to develop inventive skills and contribute to the industrial and social life of the country.

These national educational objectives provided the definition of certain principles in the education system. Above all, the system was seen as being national in language, programme and syllabus content. Secondly, the system was intended to provide a balance between educational development and the needs of Algerian society in terms of quantity and quality of manpower. Thirdly, these called for a coordinated approach in the aims and content of teaching programmes.

1.3. The Foundation of the Secondary School and the question of Arabization.

The foundation of the Secondary Schools was defined in Article 34 of the 1976 Ordinance of 16th April[2], which defined three major categories of schools viz General Secondary Schools, specialised Secondary Schools and Technological Secondary Schools. These three options followed nine years of education in Fundamental Schools.

The present thesis is concerned only with General Secondary Schools, which were defined by Act 13 of the 1976 Ordinance. This stated that the aim of the general schools was to prepare pupils for higher education in the various national institutions[3]. The curriculum includes four elements; Mathematics, Science, Literature and Islamic Science. Experience has demonstrated that establishing teaching programmes is a complex procedure, especially as it contains culture, educational, political and economic components.

The position of Geography was especially difficult as it was established as a transitional programme by individuals who lacked both teaching experience and the scientific ability to establish a programme. The situation was exacerbated by problems in the 1963 National Constitution and the subsequent 1964 Charte Nationale[4], both of which were suspended in June 1965[5]. As a result Algeria suffered a legislative vacuum and the priority was to build schools rather than concern with the content of the syllabus. In fact the syllabus was strongly influenced by both the French tradition and the "oriental" tradition emanating from Egypt, Syria and Iraq. Moreoever, conflict arose between the supporters of Arabic and French as the medium of instruction. The question of Arabization arose again in

June 1989 at the National Committee for the reform of the educational system, where the conflict was betwen two groups. Firstly, the supporters of Arabization of all subjects at university level, responding to the Ordinance of 16th April 1976, in order to offer the possibility for students to continue in higher education implied that school pupils had to be taught in Arabic. This group was supported by First Year university students in September 1989[6] because the new entrants were worried about their difficulties in following classes in the French language. Moreover, they preferred English as a second language at university, given its important position in the scientific field. Secondly, there were the supporters of French as the medium of teaching at University level because of the shortage of Arabic-speaking teachers in scientific and technological disciplines and because of the lack of appropriate literature in Arabic. The outcome was that the recommendation for Arabization at university level was supported and that a reconstruction in the secondary school programme in terms of content, objectives and time allocation should be undertaken. However, so far the Government has not enacted legislation but the Prime Minister gave a very clear statement on 9th January 1990 when he stated:

"It is true that the educational system nowadays is facing many difficulties, problems and demagogic opinions, but in my opinion it is necessary to provide a minimum basis which should offer effectiveness and benefit to the system of education which should provide effective training in science, technology and modern knowledge, because the educational system costs much money and effort. But when we make a simple comparison between the number of students in the schools and the number of failures, the result is disappointing and is unbelievable in relation to the failure rate in Baccalauréat, and thus we can say that our present educational system has become ineffective and unsuccessful! It represents a loss of effort, money and time, which are all needed by the country, especially the value of time and effort. The Government project for this situation is to develop the effectiveness of the educational system to meet the needs of the country. We should provide specialized teachers to accelerate the ability of the educational system to meet our needs and fulfillment.

The Arabization process and the place of the Arabic language have been decided by the Constitution and will not be further discussed, hence our aims with regard to foreign languages is as a tool for gaining scientific and technical

knowledge and technique. The question which faces us now is how to achieve both at the same time. In other words, Algeria today has no time or ability to separate between two aims. The problem of teaching and the lack of reference sources, even in foreign language, the increasing student numbers in the classrooms, are creating many problems for teaching and learning effectively. This is what we should be concentrating on at this time"[7].

These comments by the Algerian Prime Minister demonstrate that the Arabization of the education system is the subject of a great debate in society and schools, especially secondary schools because this sector is still unreformed in spite of the many changes which have taken place in the Fundamental Schools and in Higher Education. The Secondary Schools are seen by society and Government as a vital element in the education system but this is not matched by the resources available. The problem now is that changes in the Fundamental Schools, in terms of their methods, material and even teachers, have not been followed by integrated changes at Secondary level, which explains the high failure rate at Baccalauréat.

The Prime Minister was severe in his judgement as having

lost time and effort but the reality is that the problem had, and still has, a political dimension, because effective ministerial intervention has been absent in Secondary Education in the last decade. The ordinance of 16th April 1976 is now 14 years old but no changes have been implemented during this period. Hence, the creation of some branches, such as Islam and Technology, does not mean that the anticipated reform has actually taken place. These branches still lack qualified teachers and material resources and even a structured content. As a consequence, the pass rate in Baccalauréat in June 1989 in Islamic Studies was 2 per cent and in the Technology branch was 3 per cent.

The teaching of Geography in Secondary Schools has not received attention from the Ministry of Education and it is not seen as a basic subject in the scientific branches in the examination system. This has inevitably led to a lack of materials and skilled teachers. Even the institute of Geography at Algiers University was closed in the academic year 1987[8], which means that no more qualified teachers in Geography will be trained there in the future. To make matters worse, the recruitment of Geography and History teachers as overseas "co-operators" has ceased in the light

of Algerianisation and Arabization of social studies in general. The problem of teacher supply has now become crucial in secondary schools and while the aims of universities should be to respond to the needs of society, as defined in the Ordinance of 16th April 1976, it is obvious that there is now no coordination between the university and the needs of Secondary Schools.

The Arabization of the teaching of Geography, History and other Social Sciences in Secondary Schools was a far-reaching and optimistic political decision taken in 1971[9]. It was intended to "Algerianise" society and map the future course of Algerian social development. Moreover, it was regarded as an experiment towards the Arabization of all science, not only in Secondary schools but at all levels and in all subject areas. However, incompatibility and conflicts between policy and practice on one hand, and division of opinion in the population on the other, created severe problems from which the country is still suffering. The reasons for the problems result from the fact that teachers had not been prepared for Arabization due to the lack of coordination between the universities producing teachers and the Ministry of Education which employs the teachers. In the case of Geography, the situation was

further complicated by the fact that since 1971, the universities have not trained specialised geographers, but trained teachers in Geography and History in separate Departments but who were required to teach both subjects in schools. This leads us to examine more fully the specific problems of the position of Geography in Secondary Schools.

1.4. The Teaching of Geography in Secondary Schools

The teaching of Geography in Secondary Schools has remained practically unchanged since the 1974 Arabization policy and when Geography was excluded from the Baccalaureat examinations in Science, Mathematics and Technology. This latter step was taken for several reasons. These included the lack of teaching materials, the failure to define a specific programme for Geography and a lack of teachers using the national language. Moreover, many teachers found better conditions in other activities and were discouraged by the fact that the aims of teaching Geography had not been well-defined.

In 1984, an attempt was made to reform the Geography syllabus as a result of the separation of the National Institute for Secondary Schools from the Ministry of Education which was

divided into two ministries. The first, called the Ministry of Fundamental Teaching, is concerned with Fundamental Schools, to respond to the increasing number of pupils at this level and to carry through the reforms in Fundamental teaching. Secondly, the Secretary of State for secondary schools, with responsibility for reforming secondary education to integrate with the changes at Fundamental and Higher Education levels and also for developing the technological branches.

This reform inaugurated some improvements but the main thrust was to exclude some subjects from the programme while the content of the syllabus remained unchanged. The reform had three main objectives. Firstly it was intended to give pupils an optimum transition from the Fundamental Schools given the reforms carried out at this level. Secondly, after 1971 the universities were accepting increasing numbers of students, especially in Science and Technology, and it was essential for Secondary Schools to provide the necessary quality for university entrance. Thirdly, general national economic expansion placed a demand from a variety of State establishments. The Charte Nationale stated that "General and Technical Secondary Schools are extensions of the Fundamental Schools and are obligatory

paths towards Higher Education on the one hand and for employment on the other"[11]. Nevertheless, the objectives of the Secondary School were dominated by the requirements of Higher Education and paid less attention to the needs of pupils who leave directly, or after training, to work in the industrial and social sectors. The objectives of Secondary School were thus constrained by the Baccalauréat Examinations (the entry standard for university) but ignoring the needs of pupils entering directly into the work force, and this in spite of the very high failure rate in Baccalauréat.

The difficulties arose because the two Ministries were working in isolation from each other. Moreover, at secondary level, there was no rigorous evaluation or statement of objectives at the level of the curriculum, syllabus and teaching methods. The objectives appear to have been to foster the nation's economic development by nominally supplying manpower at all levels, to save foreign currency and to increase national self-confidence. We may now examine the specific proposals for Geography teaching in the official programmes of 1984.

1.5. The Aims of Geography Teaching as defined in the

Official Programme, 1984.

The official programme expressed four integrated aims reflecting links to other disciplines which may be listed as follows[10].

1. Scientific Aims

a) Geography should be concerned with the understanding and explanation of relationships between man and the natural environment.

b) Geography should seek a scientific understanding of natural and human phenomena.

c) Geography should provide pupils with an appreciation of the scientific laws which permit interpretation, discussion and synthesis of a wide variety of phenomena.

d) Geography should provide support and interaction with other scientific specialisms in cognate areas.

2. Economic Aims

a) An understanding of economic problems facing individual countries and the world as a whole.

b) Knowledge of the methods and means of development in a

variety of countries.

c) A knowledge of the scientific basis of the exploitation of natural resources and human potential.

d) To emphasise the conditions underpinning economic development at both national and international levels.

3. Political and Social Aims

a) Elucidate the positive and negative aspects of international relations.

b) To enable pupils to appreciate the political dimension of international strategies.

c) To appreciate political problems between countries, such as boundary disputes, Apartheid etc.

d) To study the essential characteristics of different nations and how this influences the development of societies.

4. Cultural Aims

a) The formation of a responsible and culturally aware population.

b) A knowledge and logical interpretation of the "time-space" evolution of Algeria and other nations.

Given these aims of the 1984 reforms, some comment may be passed on their application.

The decision of the Ministry of Education to exclude Geography from the Science, Mathematics and Technology Baccalaureat was a narrow administrative decision. It did not consider the role that Geography and History could play nor the restricted space in the time table that would be available. The Chief Inspector of Geography was moved to state that "we have the feeling that there are some people in the Ministry of Education who are prejudiced towards Geography and who have no basic training in Education. For this reason, the decision is just a starting point towards excluding Geography from the scientific branches altogether."[11]

As a consequence, there has been a loss of morale amongst Geography teachers and students knowledge, even of their home country has declined. Moreover, confirmation of the exclusion of Geography from the third year syllabus of the Mathematics, Science and Technology Baccalauréat was announced in October 1988.[13] This decision was taken by

the Minister of Education without any consultation with inspectors or teachers. This created many problems in the First and Second Year syllabus and unbalanced the curriculum of secondary schools as a whole. The inspectors of Geography made a protest stating that "we cannot understand the objectives of this decision, which did not consider our opinions. The effect upon our students and secondary education in general is negative. The exclusion or addition of a subject should be considered as an educational matter not as an administrative opinion. The Minister should reconsider the opinion of Inspectors. The curriculum should be seen as a whole body of knowledge, experience, methods and resources. We are absolutely opposed to the decision without reservation".[14]

It is clear that the Ministers of Education exercise their personal views whereas there is in fact a process of consultation laid down in law. Ordinance no. 76-68 of 16.4.76 provided for the creation of a "Council of Education" with the following provisions;

Article 2. The Education Council has the task of studying and debating problems relating to education and training in all aspects and after technical advice should proceed to studies and overall analysis leading to diverse recommendations.

Article 14. The Education Council may invite participation in its work from all persons whose collaboration would be useful.

Article 16. The Minister for Primary and Secondary Education has responsibility for execution of the Decree which will be published in the Journal Officiel de la République Algérienne Démocratique et Populaire.[12]

It should be noted that the Ordinance stated that the Minister of Education should refer to the Education Council any decision concerning the system and curriculum development. It is clear that the provisions of the Ordinance have been ignored and that the views of Inspectors and advisers have not been considered seriously. The debate over Arabization has dominated political thinking rather than concern with reforming curricula. Thus the Geography syllabus does not even conform to the expressed objectives in the Charte Nationale. The first chapter of the Charte Nationale states that;

"The Algerian people are Arabs and Moslems. Islam is the sole religion and it is one of the strongest factors influencing the Algerian personality".[15] Thus, Algerian civilisation, which was primarily derived from the Arab race

and the Islamic faith should feature in the teaching programme to give pupils insight into their civilisation and their origins. However, Algeria also occupies a strategic position as a link between the North (Europe) and the South (Africa) as well as being part of the Greater Maghreb (Algeria, Tunisia, Morocco, Mauritania, Libya). Algeria has close relationships with many other African and Mediterranean countries and the Charte Nationale states that "Algeria believes in the importance of unity between people and good neighbourliness with other countries. In this respect Algeria considers profound Arab-African cooperation as a strategic aim of major economic importance".[16]

In addition to the above political aim, Algeria has attempted to develop south-south relationships as reflected in numerous world wide pacts. Also, as a Socialist country Algeria has forged links with other Socialist countries but also has undertaken strong economic and technological cooperation with the EEC.

Reflecting these historical and geographical ties it is clear that Algerian pupils should be well informed on relationships to the Arabs and the Islamic World, Mediterranean countries and the Maghreb, Africa, non-aligned

countries and the Third World in general, and the socialist and capitalist group of countries. With these relationships in mind we may now describe the structure of the secondary school programme in Geography.

1.6. The Secondary School Programme in Geography

The curriculum in Geography for General Secondary Schools is illustrated by Table 1.1.

Table 1.1

The Secondary School Geography programme

Year	Syllabus	No of lessons
FIRST YEAR	1) Astronomical geography	06
	2) General geography	23
	3) Human and Economic geography	10
	TOTAL	32
SECOND YEAR	1) Geography of Maghreb	08
	2) Geography of Algeria	26
	3) Geography of Morocco-Tunisia Libya-Mauritania-and West Sahara	08
	TOTAL	42
THIRD YEAR	1) Modern Economic systems	03
	2) The capitalist world	14
	3) The socialist world	10
	4) Arab countries and third world	13
	5) Raw material resources	03
TOTAL		43

Comparing the programme with stated national aims, it is clear, as many geography teachers have commented, that there is a lack of coordination. For example one of the national aims is to elucidate the nature of international relationships, especially in the case of the North-South dichotomy, whereas the syllabus gives little attention to the North-South dialogue. Similarly crucial national concerns such as boundary disputes are ignored. Moreover, the benefits to be gained from the relationship between Geography and historical events are not considered by either discipline. However some of the most severe problems in teaching concern the system of examination which is applied to the above curriculum.

1.7. The National Scheme of Examination Assessment

There are two types of examination in General Secondary Schools, internal and official examinations.

There are three internal examinations which consist of periodic assessment of pupils. These examinations are taken every three months and are compared with two unscheduled pieces of set work (devoir) also taken every

term. The mean mark arrived at is the average of the two "devoirs", plus the results of the examinations divided by two.

Internal examinations during the three years of secondary study are organised without any external control or coordination and therefore a number of problems may arise. For example, the total freedom of teachers to compile examination papers can result in unfair papers and consequently inaccurate marks. The question papers of the various subject modules within the same school are not coordinated and this can result in variations in marking which can influence the reaction of pupils irrespective of their intelligence and aptitudes. Similarly, the examining methods adopted by different teachers can vary substantially; some favour long, generalised questions while others prefer short specific questions based on a single lesson. Finally the minimum pass mark is not fixed nationally and the number of students passing in the class is arbitrary rather than reward for hard work or ability. There are also variations in the proportions of pupils passing from one part of the country to another and also variations in the pass rate in the three years. The national target for the failure rate is 10 per cent. However the achievement

varies from 7.2 per cent in the first year to 5.09 per cent in the second year, but rises to 34.38 per in the third year. These variations clearly demonstrate the impracticality and inconsistency of the national examinations based on internal assessment.

The second type of official examination is the school-leaving examination, the Baccalauréat. Act 41 of the 16th April 1976.[13] stated that "Secondary School education terminates with a certificate. The methods of obtaining this certificate are to be defined by an Act".[18] The Baccalauréat was, and still is regarded as a crucial examination as it is the only certificate awarded in secondary schools and opens up many future prospects for pupils. The Baccalauréat is the only qualification recognised for entry to university and other Higher Education institutions, especially the highly specialised colleges (modelled on the French Grands Ecoles). Additionally the Baccalauréat enhances job opportunities because of the nation's demand for people with intermediate qualifications. The Baccalauréat examination is organised and supervised by a Directorate within the Ministry of Education and is held once a year, usually in June.

Teachers, inspectors and Directors supervise the examinations which are held nationwide. However, marking takes place on a regional scale. Question papers are set by a National Committee for each subject area and are sent to each examination centre on the morning before the examination. The examination may last up to three days, depending on the particular subject area. The candidates' names and registration numbers are excluded during marking and new reference numbers allocated. The true identity of the candidates is only known during the final deliberations. Each paper is marked by two different teachers and if the difference between the two sets of results is greater than three marks a third examiner is involved and the highest scores of the three are retained. The results are announced in the press, by radio and officially to the schools concerned. Some comments may be made on the problems that have arisen in the case of the Baccalauréat examination in Geography.

The form of the Geography Baccalauréat examination has remained virtually unchanged since 1963 and no longer reflects the development of the educational system as a whole. It is certain that it no longer represents the true capability of pupils. Some of these deficiencies may be

listed.

Firstly, the questions are structured around a single unit from the whole programme and do not assess work over the whole three years. Secondly, the questions are concentrated on practical studies whereas the programme does not include practical and fieldwork. Thirdly, the actual questions are often ambiguously phrased. Confusing key words introduce an element of "noise" which misleads the pupils who may not be familiar with the terms used. This same problem can also affect the marking and lead to inaccurate assessment. Fourthly in the 1989 examination students were required to draw graphs in spite of the fact that pupils had not been trained to do this but simply to analyse and draw comparisons from graphs. For all these reasons, the process of examination content has become progressively at variance with the reality in schools.

Even more serious are the procedures for correction of Baccalauréat scripts. Considerable variations occur in the examiners interpretation of what is demanded by particular questions, some questions are very general others are quite specific but often the pupils and even teachers, are not clear what is required in response. There is little

standardisation between examiners of what type of response is appropriate and varying personal judgements result. This inevitably results in conflicts between a good performance in the internal examination and a high failure rate at the end of secondary education. To complicate matters further, the fact that most Geography teachers are not qualified leads to the setting of inappropriate internal examinations and thus poor preparation for the Baccalauréat papers. Especially this applies to teachers who consider that memorisation of lessons is sufficient preparation rather than training pupils to answer problems geographically.

The lack of trained Geography teachers is a major factor in the high failure rate in Baccalauréat. It must be said that the Inspectorate has not been effective in improving the situation through appropriate guidance. The Baccalauréat examination is therefore unsatisfactory in terms of the linguistic usage in questions, which leaves too much to the judgement of pupils in interpreting what is required, the assumptions as to the "cultural" awareness of pupils (which handicaps students from the remote mountain and Saharan areas) and the narrowness of some questions which may relate to a single lesson.

In the light of the above problems; the impact of Arabization, the employment of unqualified teachers, the lack of integration with Fundamental Schools and university requirements, the arbitrariness of examination procedures and the lack of meaningful curriculum reform, it is not surprising that the pass rate in Baccalauréat has fallen catastrophically, as shown in Table 1.2.

Table 1.2

Pass Rate in Baccalauréat 1972-88

Academic Year	%
1972/73	43.81
1973/74	47.73
1974/75	42.63
1975/76	17.05
1976/77	19.18
1977/78	9.13
1978/79	24.50
1979/80	24.05
1980-81	24.29
1981/82	25.84
1982/83	25.11
1983/84	11.03
1984/85	16.86
1985/86	17.51
1986/87	12.58
1987/88	7.82

Source: Ministry of Education, Direction de Planification

Sous-Direction des Statistiques, 1988

REFERENCES

1. Ordinance of 16.4.76. Hamzat El Wasl, No. 11, 1976. Ministry of Primary and Secondary Education.
2. Idem 1.
3. Idem 1.
4. Charte Nationale, FLN Algiers, 1964.
5. Proclamation of June 19th, 1965.
6. El Chaab, 26.9.89, no. 8057.
7. El Chaab, 9.1.90.
8. The National Committee Reform Project for the system of Education, May, 1989. Ministry of Education.
9. La réforme de l'Enseignement Supérieur, Ministère de l'Education Supérieur, 1971.
10. Programme of Geography and History, 1984, Ministry of Education.
11. Report of the Chief Inspector to the Ministry of Education, 1989.
12. Ordinance of 16.4.76, Hamzat El Wasl, Ministry of Primary and Secondary Education.
13. Idem 12.

CHAPTER 2

METHODOLOGY

The previous chapter summarised a wide range of complex problems which have afflicted Algerian Secondary Education since Independence. It might be assumed that this background would have stimulated a wide range of documentary and published work. Unfortunately this is not the case and a methodology has had to be devised which takes into account a virtual absence of useful published data.

2.1. Documentary problems

This research of necessity is primarily based on original data acquired in the field because of the lack of relevant documents, especially in the field of curriculum evaluation. There is a lack of any published work or committee reports concerning the evaluation of both the curriculum and the examination system. Even the Directorate of Examinations, while aware of the severe decline in the Baccalauréat pass rate, has published no reports. Its data is often inaccurate and contradictory and there are discrepancies in the archival data of the Directorate of Examinations on the one hand and the Statistical and Planning Office of the

Education Ministry on the other. Even the reports of the Inspectorate of Geography and History fail to analyse the situation in schools and the lack of teaching materials.

Although there is a statistical and Planning Office in the Ministry of Education, it has inadequate data at secondary level. Moreover, the level of bureaucracy makes it impossible to gain access to what data exists. Research is regarded as a political investigation and obstacles were created for the author. For example at times permission to consult documents was referred to the General Secretary and even the Minister himself. Similarly attendance at the correction meeting of the Baccalauréat examinations in June 1989 on the grounds given by the General Secretary that "Baccalauréat is a political event therefore we have to ensure the secrecy of the examination". This is in spite of many years of teaching experience and my previous participation in the correction of Baccalauréat papers. What data is released is often inaccurate. For example two weeks was spent in the Direction to check the level of qualification of teachers from their individual dossiers, which revealed a situation totally at variance with that provided by the administration.

Given these difficulties, official data has had to be largely ignored and there was no alternative to collecting data directly from the schools, teachers and Inspectors (many of whom had no formal qualification in Geography).

2.2. The Methodology employed

Given the lack of official data, the application of questionnaires, the holding of interviews, the conduct of experiments and classroom observation were the obvious means of gaining raw data. To this end, 200 pupils from both the second and third years of Secondary Education, 100 geography teachers, six members of the Institut Pédagogique National (IPN) , ten Headmasters and twelve Inspectors of Geography and History were interviewed personally. Five hundred pupils in third year were chosen in different schools for an experiment testing responses to the Geography questions in Baccalauréat. For this purpose they were divided into two groups - a control group and an experimental. In addition, ten schools were chosen for observation of teaching methods. These were selected taking into account the school size, the social area and the age of school, to gain a representative sample. The observations were extended to include the materials available for teaching in the different years,

including the age, quality and language of the materials and their effectiveness in the teaching process.

In summary, the data and documentation acquired may be categorised as follows:-

1) Questionnaires were administered to a sample of pupils and teachers to gain direct empirical data.

2) Personal interviews were held with Headmaster, Inspectors and the Geography and History Research Committee of the Institut Pédagogique National and with the Director of Education for Algiers Province.

3) Statistics were collated relating to examination results, teacher qualifications, evolution of school and pupil numbers, class size, materials available, subject timetabling, the change in teacher numbers and the Algerianisation of geography teaching.

4) Observations were made in school of teaching methods, the availability and use of materials, difficulties experienced by pupils during lessons and the relationships between pupils and teachers.

5) The official curriculum was evaluated in terms of its structure and concepts and in terms of the linking of History and Geography teaching, the link between Fundamental and Secondary School programmes and reform and innovation in Geography teaching and learning.

6) The legislative background was considered, especially the National Charters as they relate to Algerian interests as an African, Arab, Moslem and Mediterranean nation and the impact this has had on the standard national curriculum. The Education Law of 17.04.76 and the Act No. 81-39 of 14.03.81 were examined as was the timetable of class hours allocated to Geography. Consideration was given to the proposals of the National Seminar on the education reform of June 1989.

7) The available text books were examined in terms of their content, presentation and use by teachers and pupils.

8) The examination questions set in Baccalauréat over the last decade were evaluated in terms of structure, language, statistical methods demanded and in terms of pupil performance.

9.) Finally, a seminar was organised by the Author in Algiers, in December 1989, for Geography teachers. This seminar allowed teachers to participate directly in open discussion and to express their opinions and criticism of such aspects as curriculum, teaching methods and examination and even the negative role of the Inspectorate and the Institut Pédogogique Nationale. The teachers were willing to participate precisely because there were no administrators present and no written documents.

2.3. Questionnaire Design

The initial decision was to locate the sample of schools selected in the Algiers area. This had several practical advantages in that a large number of schools could be sampled in a short time in a variety of urban social areas. Moreover, the sample included schools with specialist Geography teachers, which would not always have been the case elsewhere in the country.

In the case of the questionnaire which was administered to 200 Third Year pupils, a variety of methods was considered; open, closed and survey. A closed questionnaire was preferred, which guided the pupils directly to the data being

sought and yielded results that can be classified and statistically analysed easily. Care was taken over the exact wording to avoid ambiguous questions. It was designed to proceed from general to specific questions as a means of interesting and involving the respondents. Care was taken to include schools with a range of date of foundation, from the original French lycées to very recent creations.

Many problems were encountered in conducting the questionnaire, including the lack of background studies from the Ministry of Education. The Ministry's priority has been to increase the number of children in school rather than to consider the quality of teaching provided. Although the National Research Committee exists, its work has consisted essentially of providing new text books and teaching documents rather than to reform the curriculum from a critical standpoint. Their work was isolated from direct contact with schools. Thus no prior research was available to guide the author.

Other problems were more specific, especially the degree of suspicion and hostility on the part of teachers. Some of them regarded it a questioning of their knowledge and

competence while others had no real commitment to teaching in any case. In some schools bureaucracy was a problem in that Headmasters postponed interviews in spite of written authority having been gained from the Ministry of Education. The random nature of timetabling made it difficult to make specific arrangements and sometimes the absence of information concerning teachers' specialisation made it difficult to contact the right person. The questionnaire administered is indicated in Appendix 1 and was answered in Arabic.

2.4. Interviews

It was considered essential to interview Inspectors as they have a wide experience and important role in Secondary Schools. There are twelve Inspectors in Geography in Algeria as a whole. Their role is to supervise the work of teachers and to inspect at first hand progress in teaching and curriculum. They also supervise the training of new teachers.

They have responsibility for the preparation and implementation of the curriculum and the Ministry of Education relies heavily on their expertise. Unfortunately

their work has consisted of inspection per se and they have neglected the importance of conducting educational research. Some improvements were attempted for the curriculum in 1983 but unfortunately, the lack of research in the wider evolution of education meant that those changes were ineffective.

One of the main functions of the Inspectors is to organise and supervise seminars with both experienced and new teachers at least three times per year. This is intended to exchange experience, ideas and innovations, but one major drawback is that the Inspectors themselves often lack the basic elements of geography. Of the twelve Inspectors, two refused to be interviewed and it proved impossible to contact a further two. Remarkably, some of the Inspectors interviewed were poorly informed on the syllabus and had little understanding of the problems encountered by teachers and pupils as they were not Geography specialists. It was clear that they did not hold the required number of meetings with teachers and as a result simply try to impose their own ideas on teaching without regard to rapid developments in society and changing educational needs.

It was decided to interview Headmasters because of their

direct involvement in the administration of schools and in some cases because they had previously been Geography teachers. Similarly, the National Geography Committee of the Institut Pédagogique National was considered an important contact because it consists of experienced teachers.

Clearly, the present research required that teachers should be interviewed as a direct source of information. Accordingly 100 teachers were sampled by means of a questionnaire (Appendix 2). This particular exercise posed no special organisational problems although as will be discussed later some inconsistencies were detected in the responses.

2.5. Experimental testing

In order to test teachers' and pupils' reactions to the Baccalauréat examination it was decided to carry out an experiment with Third Year pupils in a variety of schools in the Algiers area. A sample of 500 pupils was selected and divided into two groups.

a) Control group.

The first group was used as a control in which the pupils were given the original Baccalauréat questions from a previous year and which was administered under normal examination conditions. Correction was performed according to the official scales and weightings per question in order to calculate success and failure rates. This enabled the elucidation of the reasons for failure due to the format of the conventional examination.

b) Experimental group

The second group was given the substance of the same examination but with the following improvements.

1) Improvements to key words to clarify meaning.

2) Changes to question structure by re-wording.

3) Changes to the length of time allocated to questions in order to elicit short precise answers answerable in the time available.

4) Improvements were made in the presentation of data and

statistics to enhance clarity.

5) Removing confusion and ambiguity in questions.

The methodological objective was to compare student performance in the conventional examination (the control group) and compared with the improved version of the examination (the experimental group).

2.6. Observation

This exercise concentrated on classroom observation of teaching methods and the availability of teaching methods and the availability and use of teaching materials. The pattern of interaction between teacher and pupils can only be derived from direct observation.

Observation involved consideration of pupil numbers in the classroom, interaction with the teacher, the availability of materials and how teachers used them, the teaching methods used and pupil participation. The context was to study teachers aims and their competence to achieve these aims. Comparisons were also made between Geography and History lessons. The observation exercise encountered some difficulties in terms of reluctance of teachers to

participate and bureaucratic obstacles in terms of gaining permission.

2.7. Concluding Seminar

At the end of the field research, the author organised a teachers' seminar in September 1989. This was intended to gain confirmation of the results of the research and to promote discussion. Seventy five teachers attended the seminar and contributions were valuable as no administrators or Inspectors were present.

CHAPTER THREE

THE REFORM OF SCHOOL EDUCATION

Previous chapters have indicated the general context of Algerian Education and the methodology to be employed in this thesis. However, before embarking on the empirical work, it is necessary to examine in some detail the effort of reform since 1962. This provides a yardstick against which to measure progress towards the objectives stated by the Government. These were expressed by the Minister of Education in 1976 as follows:-

"In accordance with the mission of building an Algerian Socialist Society, the national schools should have as their role the building and developing of the national personality and spread the Islamic Arab principle of civilisation for creating new behaviour conforming to rapid change in society. This new period of building a new society should contain a deep political conscience, awareness and working commitment to respond to the demands of society and achieving its ambitions of cultural economic and social needs.

For these reasons, we must make a fundamental change in both the shape and content of Algerian schools. In this respect reform is an Algerian choice, because the system of education inherited from the French period was oriented to achieve French purposes, which do not respond to our objectives and society and involved many contradictions to our principles in both content and curriculum which are not accepted in Algerian society undergoing rapid development. For this reason, the reform is essentially for Algerian purposes and objectives, following an overall strategy of the great political options of Algeria."[1]

In addition to the above political impulsion for reform, the Government had to face an increasing number of pupils, especially in Primary and middle schools as a result of the population explosion.

Table 3.1. shows the expansion of pupils in primary education and Table 3.2. that of the middle schools. Table 3.3. shows the growth in secondary schools.

Table 3.1

The growth of Primary School Enrolment, 1962-83

Academic Year	Girls	Boys	Total
1962 - 63	282,842	494,794	777,636
1964 - 65	463,130	751,905	1,215,037
1966 - 67	513,115	857,242	1,370,357
1968 - 69	575,379	976,110	1,551,489
1970 - 71	700,924	1,150,492	1,851,416
1972 - 73	855,031	1,351,862	2,206,893
1974 - 75	984,991	1,514,614	2,499,605
1976 - 77	1,653,883	1,653,883	2,782,044
1978 - 79	1,227,932	1,744,310	2,972,242
1980 - 81	1,307,550	1,811,277	3,118,827
1982 - 83	1,375,135	1,866,789	3,241,924
1983 - 84	1,422,855	1,913,681	3,336,536

Source: Information Statistiques No. 22. Mars 1984

Ministry of Education

sing. or pl.?
also on following pages

Table 3.2

The Growth of Middle School Enrolment 1962-83

Academic Year	Girls	Boys	Total
1962 - 63	14,246	36,868	51,014
1964 - 65	28,703	71,379	100,082
1966 - 67	38,854	96,482	135,336
1968 - 69	46,758	119,979	166,737
1970 - 71	66,370	170,514	236,884
1972 - 73	102,239	230,079	332,318
1974 - 75	138,242	281,517	419,759
1976 - 77	209,960	402,269	612,229
1978 - 79	312,075	532,216	844,291
1980 - 81	396,657	633,227	1,029,844
1982 - 83	402,381	593,039	1,002,420
1983 - 84	458,126	668,394	1,126,520

Source:- Information Statistiques No. 22 Mars 1984

Ministry of Education

Table 3.3

The Growth of Secondary School Enrolment 1964-86

Academic Year	General Secondary Schools	Technical Secondary Schools	Total
1964 - 65	7,634	1,397	9,031
1966 - 67	12,368	2,914	15,282
1968 - 69	17,768	4,022	21,790
1970 - 71	29,212	6,786	35,998
1972 - 73	37,947	7,854	45,801
1974 - 75	66,655	9,142	75,797
1976 - 77	101,806	11,410	113,216
1978 - 79	142,526	11,904	154,430
1980 - 81	197,455	14,493	211,948
1982 - 83	259,442	19,857	279,299
1984 - 85	316,272	42,577	358,849
1985 - 86	356,616	66,886	423,502

Source: Information Statistiques, 1987, Ministry of Education

The very rapid growth shown in Tables 3.1, 3,2 and 3.3 reflects the policy of free, compulsory and democratic education for all pupils, which was expressed by the Minister in 1976 as follows:-

"The reform is to ensure .....

1) The right of education and training for all Algerian citizens.

2. Compulsory schooling for all pupils in the age group 6-15 years old.

3. The Government guarantees the equal right of access to secondary and higher education for all pupils.

4) Free education for all Algerian citizens at all stages.

5) Arabic must be the language of instruction at all stages."[2]

These principles, enunciated by the Minister were derived from the National Charters from 1956 to 1976 and enshrined in the Ordinance of 16.4.76 concerning Fundamental and Secondary Schools. The reform aimed to unify the language of instruction as Arabic in an attempt to create a national language in spite of the lack of experienced teachers and source materials in Arabic especially in the scientific

branches. This applied particularly in universities where scientific and technical disciplines are still taught in French. It is clear that reform in the Fundamental Schools, which were rapidly Arabised, and the universities, which were partially Arabised, has left Secondary Education in a vacuum as the reforms have not been completely applied. Nevertheless, a schedule of reforms was established as follows:-

1) Higher Education Reform, 1971.[3]
2) Fundamental Schools Reform, 1980.[4]
3) Secondary Schools Proposed Reform, 1984.[5]

It is clear from the above that reforms in the education system have taken place at different times, with different objectives and under different circumstances. Moreover, in the case of university reform and the reform of the Fundamental Schools, short term needs were considered without reference to the longer term needs of the system as a whole. The reform of Secondary Schools is still incomplete in spite of its crucial position between Fundamental and University education. The curriculum in Secondary Schools does not prepare pupils adequately for university or for the work force. As an indicator, the

pass rate in Literature in the Baccalaureat in 1988 was 7.5%.

In this respect, Lawton (1981)[6] has argued that education should take into account changes in society. "There is more to education than preparing individuals for work but should also be concerned with leisure and creative abilities and with being a member of society as a whole." The individual can only become truly human and social by becoming a member of a community and a social group. The secondary syllabus should therefore aim at introducing the individual child to the world of other human beings through appropriate kinds of knowledge and experience. At present this is impossible in Algeria because of the lack of integration between Fundamental and Secondary Schools. The Ordinance of 16.04.1976. stated that Secondary Schools should be integrated but there has been no integration of curriculum planning between the two stages. As a consequence pupils have great difficulty during the first year in Secondary School. Although the reform of Fundamental Schools was very thorough, changes in Secondary Schools have been restricted to the introduction of Arabic as the language of instruction and the introduction of the Science Islamic Branch. Even the Islamic Branch only

achieved a 2% pass rate in Baccalauréat in 1988.

The reform of Fundamental Schools contained many weaknesses as a result of its rapid speed, lack of sufficient resources and above all because it was not subjected to any appraisal subsequently to test the effectiveness of the curriculum changes. In Algeria, the process of appraisal and feedback has been ignored. Thus the National Committee Report in 1989 was meaningless in that it did not seek any field evidence of the success or failure of the Fundamental School reform.

3.1. Secondary School Reform

It may be suggested that seven elements are negative factors underlying the need for reform in the secondary sector. These are:-

1. The large size of classes
2. The high examination failure rate
3. The teachers' lack of knowledge
4. Declining standards of both teachers and pupils
5. The orientation of pupil's studies is not logically organised

6. The absence of pedagogic research

7. Overall objectives are not clear.

In some respects this is not surprising given that a system was inherited geared to French needs and in which only a small proportion of Algerian pupils participated. The transition to free, compulsory and democratic education inevitably posed many problems, especially in the crucial secondary sector.

The Algerian Government decided in 1983 to create a National Committee to propose a Reform Project for Secondary Schools. The guiding considerations in its deliberations were to take into account reforms that had already taken place in the Fundamental Schools (notably Arabisation), the need to provide a structure which would orientate pupils' choice of subjects and the changing needs of Higher Education. This led to the statement of three principles:-

1) The adoption of a unified national secondary system related to national objectives and planning needs.

2) The education system should thus be integrated with other national systems - social, economic and political - so as to further national development.

3) The objectives of education should be correlated with the objectives of the national development plan.

The remainder of this chapter will now look in greater detail at the attempt to reform Geography teaching in Secondary Education.

3.2. The reform of the Geography Programme

The limited amount of reform which has taken place in the Geography Programme has disappointed most teachers. Too much was left of the existing programme which was in serious need of a radical overhaul. The main changes made were the introduction of new topics, relating to Algerian interests and world events, such as the oil crisis, north-south dialogue and food security. These lessons were additions to the third year syllabus. The aims of the Geography syllabus were still poorly defined and thus it was difficult for teachers to know whether they were achieving their objectives. It was also difficult to establish whether Geography was achieving its objectives in relation to other subjects. The programme is very large in relation to classroom time available and there are no coherent links

between the three years or to the prior experience in the Fundamental Schools. The problem of the "co-efficient" (weighting) of Geography in the secondary curriculum was not resolved. The fact that no relevant research had been conducted and that many of the Inspectors had no training in Geography but were nevertheless in a position to influence decisions. In fact, the inspector's role of monitoring teaching, conducting field research, making proposals for development has been replaced simply by an administrative function. The catastrophic failure rate in Baccalaureat should have been ample reason to consider reforms and in particular to project the reform of the Funadmental Schools forward into the secondary system.

3.3. The gap between Fundamental and Secondary School Geography

The gap between these two levels results from the Fundamental School Reform of 1980, according to the Ordinance of 1976. The result of this gap were specified at the seminar organised by the author in 1989. Notably the reform greatly expanded the coverage in Social Sciences which as well as Geography, included History, Economics, Political and Civil Education. Some of this subject coverage does

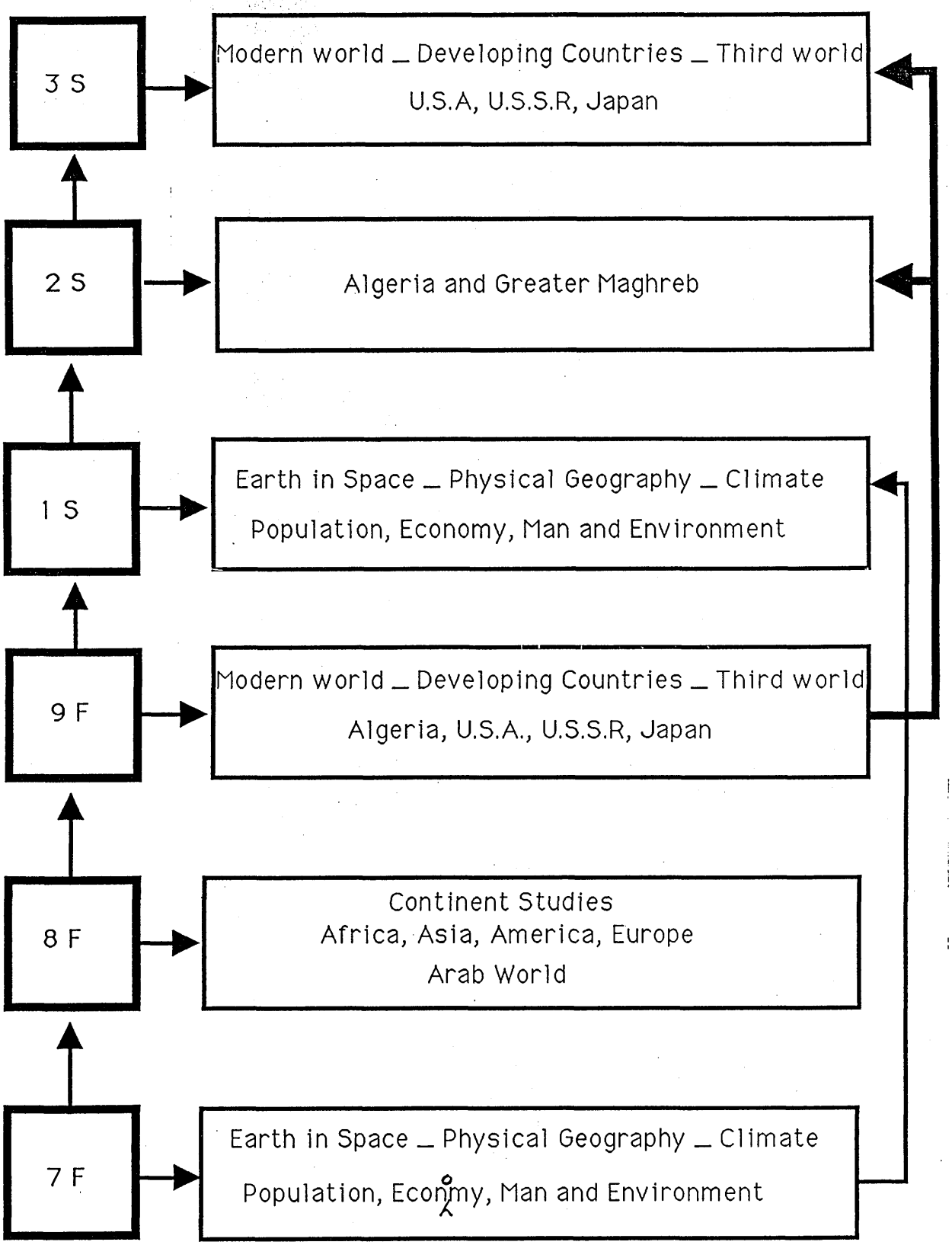
not exist in Secondary Education. Similarly, teaching methods were changed. Teachers in Fundamental Schools are not Geography specialists and concentrated on memorisation skills whereas the emphasis at secondary level is supposed to be on observation and analysis. This has led in particular to pupils experiencing difficulty in examinations at Secondary School level. In contrast to these gaps, there were also areas of overlap. For example the syllabus for 9 year olds covers the same topics as the second year of Secondary School and the content of 7 year olds overlaps with that of first year at Secondary level. Teachers are concerned at this repetition and have difficulty in retaining pupil interest. There was widespread agreement in the seminar that pupils experience difficulty in the transition to first year of Secondary and generally obtain lower marks than they achieved at the Fundamental level. This reflects the objective of encouraging pupils towards independent study, analysis and forming their own judgements. As Tyler (1949) has stated "in general the learning experience should give the students an opportunity to follow through the essential steps in problem solving, to see what each of the steps involve and to become skilled in taking the necessary steps. It should of course be obvious that the students learn to think

through the experience of solving problems for themselves. The objective is not acquired when the teacher does the problem solving and the student only watches.[7] Tyler also states that "teachers are poor at constructing tasks for social learning and the dominant learning situation still tends to be teachers talking and children learning (or pretending to listen). This tendency has not been helped by recent practices in schools of "unindividualised" learning and computer-assisted learning where pupils usually have no opportunity even for informal consultation with their peers. Thus in Algeria, the rather formal and didactic methods of teaching in Fundamental Schools conflict with the objective of more active, problem-solving approaches at secondary level.

Nicholls and Nicholls (1971) have stressed the need for vertical and horizontal relationships in the design of a Geography syllabus. Thus second year learning should be related to what has been acquired in first year (vertical relationship). Similarly, what is learned in Geography should be related to what is being learned in cognate disciplines, such as history (horizontal relationship).[8] Figure 3.1 indicates the vertical relationship between the syllabus in the Fundamental and Secondary Schools.

Fig. 3.1

The geography programme in fundamental and secondary school



F = Fundamental S = Secondary

A further conflict between Fundamental and secondary schools concerns the order in which the subject matter is presented, taking into account a pupil's age, cognitive development and experience. Thus some countries have attempted to move from the concrete to the generalised which places emphasis on an understanding of the local physical environment as a starting point. For example in Iceland there is a major emphasis on the teaching of physical geography and geology because the island is a superb laboratory of vulcanism and of climate in terms of darkness, wetness and cold. In England and Wales, the wide variety of geological structure in so small a compass has encouraged the study of small regions. In Spain pupils reach an understanding of general geography through starting with regional or local phenomena and in France, geography teaching moves from the concrete to the abstract.[9] In Algeria, the geography programme does not take into account the need for first year pupils to start with the environment of the homeland and thus gain an insight and vocabulary concerning a familiar setting. However in practice we can see from Figure 3.1 that in the Algerian programme, study of the homeland, in both the Fundamental and Secondary levels is studied alongside the USA, USSR and Japan. It would be logical to give the study

of Algeria much greater prominence at Fundamental School, both because of the immediate contact with the environment and also to meet the objective of the Government of creating a culturally aware population with a knowledge of time-space evaluation in Algeria. The absence of teaching of Algeria in five years of the overall school programme explains the fact that many students in the final year of secondary school cannot draw a map of Algeria.

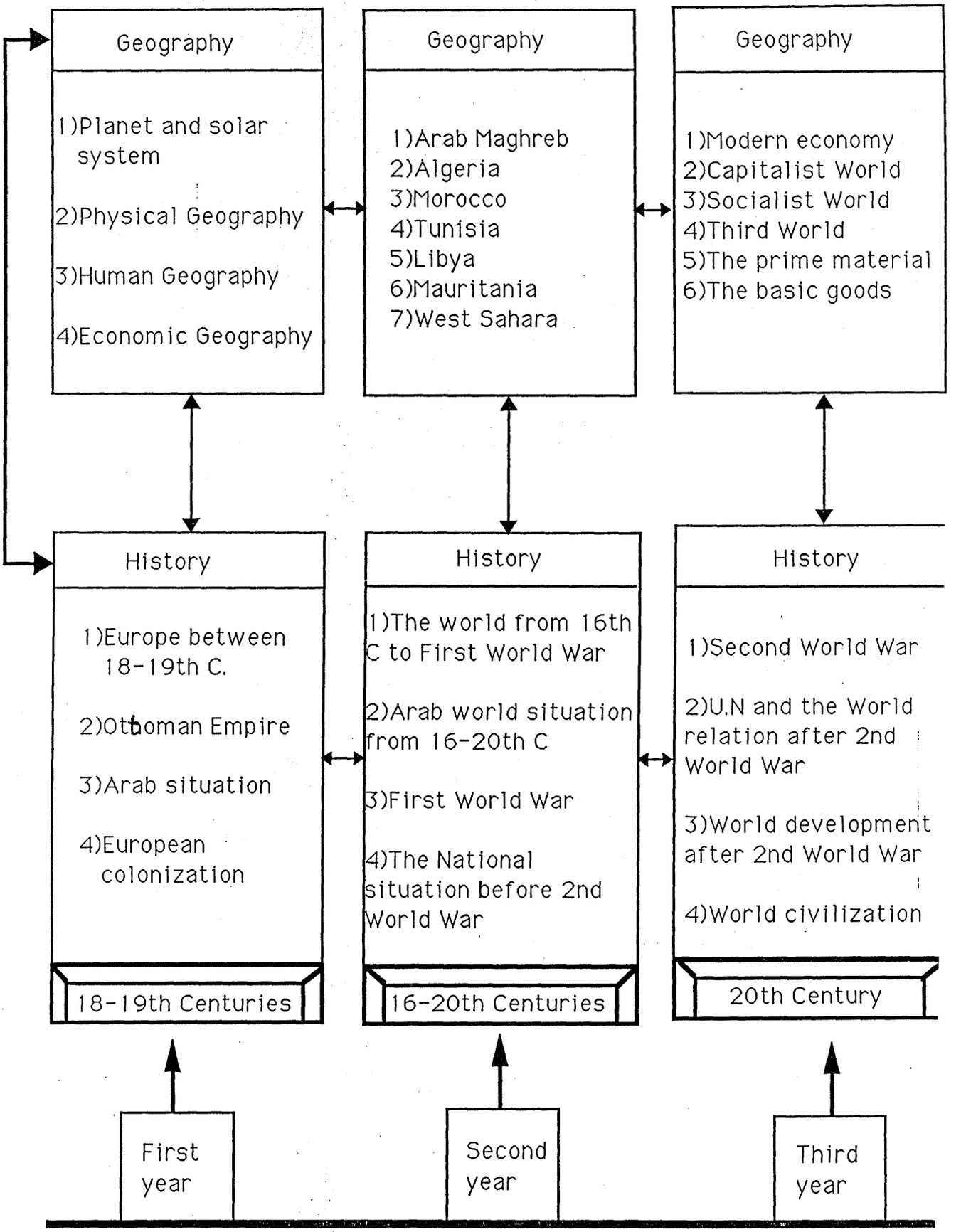
3.4. Horizontal relationships - the lack of integration between History and Geography

Historically, the study of Geography has been linked with History in Algeria, a tradition inherited from the French. Geography and History were studied as cognate subjects at university and very commonly Geography is taught at secondary level by teachers whose main qualification is in History. It would be expected, therefore, that there would be clear horizontal relationships between History and Geography especially as the Chartes Nationales from 1956 to 1986 and the Ordinance of 16.04.1976 established very similar objectives for History as those defined for Geography viz creating an aware citizen to support the unity of society, creating an awareness of Arab-Islamic

civilisation and of Algerian identity etc. In practice, the History curriculum has very little Algerian content other than the French colonial period and the Revolution. Not surprisingly, the opportunity for horizontal relations are limited. According to Nicholls and Nicholls (1984) "organizing a learning opportunity so that the desired learning takes place is one of the crucial tasks in curriculum development. The attainment of objectives usually takes a long time. A single learning experience which a pupil has may have very little effect on him, so that the problem is to arrange learning opportunities in such a way that they support and reinforce each other. In order to do this, learning opportunities must be related in certain ways. For example what is learned in Geography in the first year may be related to what is learned in the second year..... and what is learned in Geography in the first year may be related in some appropriate way to what is learned in History during the same year, and this is referred to as a horizontal relationship."[10]

Fig. 3.2

The Geography and History programme in secondary schools



When we examined the Geography and History programmes we find many contradictions in spite of the fact that some historical events might be explained by geographical phenomena and geographical location and environment are significant elements in many historical events. Closer links between Geography and History in the programme would have a unifying teaching effect and this integration does not refer only to knowledge but may be related to skills, attitudes and values leading the pupil to perform more effectively. In practise this is not achieved in Algeria, as may be exemplified as follows:-

In First Year, Geography Lessons are related to basic knowledge of physical, economic and human geography while the History syllabus is based on European History and Colonisation and the Ottoman Empire. Ideally the Geography syllabus would provide knowledge of Europe, Asia and Africa to help pupils understand the movement of colonisation. In the Second Year, when the History syllabus covers the long period from the 16th to the 20th centuries including the whole Arab world the Geography programme considers only the Maghreb, and mainly Algeria. There is a lack of integration and coordination between the three years. Whereas Algeria is taught in the second year of Geography it

is found in the third year of History. The history of the Arab World is studied in the second year whereas it is taught in the Third Year of the Geography curriculum.

A range of problems concerning the reform of the Geography programme have been raised; the lack of thorough reform in the Secondary level in general, the lack of coordination with the Fundamental curriculum and the absence of effective vertical and horizontal integration. To complicate matters further, the nature of Algerian society, politics and economy is in very rapid evolution whereas much of the school subject matter has remained unchanged and become virtually irrelevant. Even the relationships between teachers and pupils has changed and the development of new teaching aids, such as audio-visual equipment, means that there should be no excuse not to attempt innovations. With these problems in mind, the author convened a day seminar of geography teachers in Algiers in 1989 in order to sample teachers reactions to the lack of reform in the secondary programme. This was a follow up to the questionnaire survey already conducted.

3.5. Teacher's Reactions

The main view expressed by teachers concerned the size of the programme and the limited time available to teach it. Over 90 per cent of the teachers who completed the questionnaire and who attended the seminar considered that the syllabus was too large and that as a result they never completed the first and second years. In some cases up to a third of the syllabus of the first year had not been covered by the end of the academic year. The time allocation for Geography in the first year is as follows:-

There are 33 weeks in the academic year and there are 30 lesson units in the First Year syllabus. From the 33 weeks must be deducted the one week of exams each term, the period of the Baccalauréat exams when teachers are occupied with the holding of the examination and in some cases are absent for three weeks correcting the Baccalauréat. A further reduction must be made for statutory holidays. In total up to 14 lessons are not given for the above reasons. The situation is very similar in the second year.

A second very strong reaction was that if we take an individual lesson from the first year there is no link

between the time available (one hour) and the content of the lesson as defined by the Programme.

Table 3.4

Time and content of a selected Lesson in the First Year Syllabus

Lesson 8	Time	Content
Earth	1 hour	1. Earth in the solar system
		2. Solar system
		3. Creation of the earth
		4. Earth revolution and time
		5. Shape of the earth

Source: Official Programme, Lesson 8

A second example reinforces the problem further.

Table 3.5

Time and Content of the climate lesson in the First Year Syllabus

Lesson 10	Time	Content
Climate	1 hour	1. Pressure systems 2. Winds a. Measurement b. Coriolis effect c. Global pressure system d. Global surface winds e. Wind types f. Air masses and cyclones

Source: Official Programme, Lesson 10

These examples demonstrate the total imbalance between subject matter and time allocation in the compulsary lessons. It should be realised that the teachers will use different methods and have different materials and that the lesson provides a series of headings rather than teaching objectives. In the opinion of teachers, each of the headings would justify a lesson in itself, reinforced by

fieldwork, practical work and map study. Thus, material which pupils find interesting since it concerns their everyday experience cannot be taught effectively.

This imbalance between subject matter and time available is repeated in the Second Year, as further examples show.

Table 3.6

Time and Content of Lesson on Industry

Lesson 13	Time	Content
Major industrial sectors	1 hour	A. Heavy industry
		1. Iron and Steel
		2. Engineering
		3. Petro-chemicals
		B. Light industry
		1. Clothing
		2. Food
		3. Leather

Source: Official Programme, Second Year

This subject matter is one of the most important in

Algeria's development especially as its aims are "to make pupils understand the role of industrialisation in exploiting Algeria's resources and also knowledge and logical interpretation of the time-space evolution in Algeria and other nations". It is also a lesson which requires considerable study of statistical data and maps to analyse the situation.

A further example illustrates that not only is there insufficient time available to cover the topics, but in some cases the subject matter itself is now redundant. The case may be cited of the Agrarian Reform as being treated as a major event whereas the system has failed and was abandoned by the Government in 1988 and encouragement is now given to the private sector. Teachers are still obliged to teach the subject as though the Agrarian Reform had been a success.

Table 3.7

Time and Content of Lesson on Agrarian Reform

Lesson 9	Time	Content
Algerian Agricultural System	1 hour	a) The 1963 self management law b) The Agricultural Reform c) The aims, stages and problems d) Private Sector e) Modernisation f) Modern technology

Source: Official Programme, Second Year

This Lesson is the core element in the understanding of the agricultural system and the aim is "to allow pupils to understand deeply the Algerian potential in the field of agriculture and to know the method of development and horizontal linkages". This is impossible in one hour, and being based on out of date events conflicts with the general objective of the Geography programme "to provide pupils with the appreciation of scientific laws". Clearly, such a Lesson fails to stimulate pupils as the content is no longer relevant. Pupils are a part of society and should be

taught to understand changes that are taking place in society.

In addition the problems of time available and content of Lessons, perhaps an even greater problem raised by teachers is the lack of clarity in the aims of the Lessons. In this respect Long and Robertson (1966) stressed that "we are using geographical study as a means to education.... Geography lessons should as often as possible be a process of discovery. The lesson may also have its element of exposition and there will normally be certain facts, ideas or skill which the teacher wishes the children to learn. It is the teacher's responsibility to cause them to do so"[11] This suggests that teaching is a partnership between teachers and pupils with the teacher acting as a medium, of knowledge and experience. This ideal relationship where both teachers and pupils have something to contribute and something to gain can only be realised if there are clear aims for each lesson and subject. In fact the Algerian Geography programme operates in a vacuum of specific aims. Some aims are ill-defined and there are many lessons which have no stated aims, especially in the first and second years. The lesson titles and their aims (where given) are summarised in Appendix 5. It may be noted that in the

first year, out of 35 lessons, 30 have no stated aims. Even when aims are stated they are extremely vague. For example lesson 7 entitled "seas and oceans", has as its aim "to demonstrate the benefits of the seas and oceans and their influence on climate". Similarly, in the second year, out of 36 lessons, 26 have no stated aims. It is only in the third year that each lesson is accorded an aim, but again they are usually vague or meaningless. For example, lesson 17 entitled "Transport and trade in the USSR" has as its aim "to show the role of transport". Nowhere is it indicated how pupils are to participate in the lessons and consequently lessons consist of teachers talking and pupils receiving and memorising. This excludes pupils becoming involved by examining data and documents and drawing conclusions.

There is thus a contradiction between the general objectives of the programme and a lack of specific guidance on the aims of individual lessons. The teacher is thus unable to judge whether he is achieving objectives, especially when most of the teachers are non-geographers as are many of the Inspectors. The fact that the National Committee charged with reform of the programme in 1983 included all Inspectors of Geography explains why so little reform was achieved.

As few of them were trained geographers they simply relied on the old programme and failed to introduce new aims and objectives or to make innovations in teaching methods.

Other problems raised by the questionnaire results and at the teacher's seminar concerned the inadequacy of guidance and orientation given to pupils. In theory, Act 61 of the 16.04.76 Education Charter, defined orientation in schools as follows "The principle of orientation of schools is intended to take into account the ability and interests of pupils, the needs for future planning in schools, the needs for various subjects in schools and orientation should be linked to other changes at all times and stages".

In 1983, a process of "re-orientation" was introduced. This was a good measure in principle in that it was intended to permit children who had been badly orientated to change their curriculum. However, the re-allocation is based on the availability of classroom seats and usually these are not available.

3.6. Orientation

In principle pupil orientation between Fundamental and Secondary School takes place according to Article 61 of the Ordinance of 16.04.76. This stated that:

"The principle of orientation in school takes into account

a) The ability and interests of children

b) The needs for future planning in schools

c) The needs of various subjects in schools

d) Orientation should be linked to other general changes."

The Ordinance went on to state that in addition to considering student ability and preference the process of orientation should involve pedagogical research in order to guide its operation. In practice no such research has taken place in spite of high interest on the part of teachers.

The process of orientation is based on a pupil's previous work in Fundamental School during the last three years of study. A note book of each pupil's work is kept which contains the following information.

a) The examination results achieved are recorded but the fourth year results are the crucial ones considered for orientation at secondary level.

b) Teacher's opinion on pupil's ability, interests, class work and examination results are taken into account.

c) In the case of pupils with very high marks, pupil's preference and parent's wishes are taken into account.

d) Average marks obtained in the fourth year in all subjects are taken into consideration.

Given this information, orientation proceeds through two stages. The first stage involves a local school committee, which involves teachers, the school Director and a member of the school orientation team. This committee meets to decide whether the pupils should progress to secondary school, to professional education or practical education. This committee is guided by percentages based on the availability of secondary school places and percentages fixed by the Ministry of Education. In effect, the decisions are based purely on examination results and teacher's opinions and pupils interests are largely ignored.

The second stage is conducted at a regional level involving Directors of Fundamental Schools, the Directors of Secondary Schools and a representative of orientation advisers. The function is to ensure that the percentage of passing students is respected and that available places in Secondary

Schools are filled. In practice orientation procedures are not fulfilled as only 50% are permitted to progress to Secondary School. In practice these percentages vary, from 44.6% in Beida to 55.8% in Tamarasset.

In general, the orientation process is ineffective and arbitrary, following purely a technical analysis of marks rather than pupils potential as evaluated by teachers. Pupils with the highest marks gain their wishes, but pupils with lower marks are allocated in descending order to mathematics, science, technology and literary subjects. Moreover, emphasis on performance in the fourth year undervalues performance in the previous three years and manifest aptitudes. The process of orientation is a technical orientation rather than a refined pedagogical operation in particular, the low importance given to literary studies ensures that the weakest students are enrolled in this branch which explains the decline in pass rates in the Literature Baccalauréat to 7.5% in 1988.

Orientation therefore involves a great deal of inaccuracy and injustice. As the Fundamental Schools do not have a common final examination, marks can vary arbitrarily from school to school and even between subjects in the same

school. The Orientation Committees thus perform a technical and mechanical task rather than guidance based on sound pedagogic principles involving teachers opinions and evaluations.

In theory, the deficiencies of orientation between Fundamental and Secondary Schools can be corrected by "re-orientation" at the end of the first year of Secondary School, a process introduced by the Ministry of Education in 1983. This recognised that some pupils had been badly orientated and were having difficulty with the subjects into which they had been placed. The results of the first year examinations give a basis to evaluate a pupil's performance and to change syllabus. In practice, however, the possibility of reorientation is determined by classroom space and it is impossible for a pupil to change when classes are already full. Moreover, the only transfer that is permitted is from the science branch to the literature branch and not vice versa. As the nation has given priority to scientific subjects, many pupils are orientated towards science even though they are not gifted in that field. However, if transferred to literature their problems continue and this depressed the pass rate in Literature even further. Many parents prefer their children to continue

with science even though their performance is weak as they think that there will be better employment possibilities with a scientific background. Thus far, the system of orientation and Re-orientation, although sound in principle has not worked in practice and is a major factor in reducing standards in Secondary Schools.

This chapter has outlined problems, perceived by pupils and teachers alike, which stem from the failure to complete a thorough reform of Secondary Education. Some of these may be cited as representing a crisis in Secondary Education:-

1) The fall in the percentage of students passing Baccalauréat in virtually all disciplines. In the case of the Literature option only 7.5 per cent passed.

2) The attempts at reform failed to take into account the chronic teacher shortage in the various specialisations. For example in the case of Geography only 9.64% of teachers have a qualification and experience in Geography. moreover, the programmes were unsupported by adequate teaching materials.

3) In spite of the establishment of a National Institute for Pedagogy, practically no research has been carried out to evaluate curriculum reform and teacher performance.

4) The main priority has been to cope with the great

increase in pupil numbers and to create new schools rather than to reform the educational system as a whole.

5) The problem of orientation has not been solved and is still based on a pre-stated percentage rather than on pupils abilities and interests.

6) The co-efficients given to the different subjects for examination purposes by the Ministry were not clearly defined but this creates perceptions of the relative importance of subjects. The basic subjects have a high coefficient, the supporting subjects have a lower coefficient and the remaining subjects which do not count in the final examination. This engenders pupil's attitudes to examination and performance in different subjects.

7) Teaching is still based on out of date methods as new materials are lacking and the teachers have not been trained to use new methods. The older teachers have not had an opportunity to develop their teaching methods.

8) There are major defects in the examination system, especially in Baccalauréat. Some examination papers are based on only a few lessons and therefore give the pupil little choice. Moreover, the language format of the questions is often vague and confusing.

The crisis in Secondary Education therefore can be related to

institutional factors, i.e. the content and structure of the programme, the inadequacy of the teacher supply and qualification and the lack of resources in general.

The question of resources may be divided into two components, human resources and material resources. By human resources we imply the number, quality and experience of trained teachers. By material resources we mean the infrastructure of teaching aids available to teachers and pupils in the classroom. Chapters 4 and 5 will examine each of these resources in turn, emphasing the situation in Geography.

REFERENCES

1. Ordinance of 16.4.76. Ministry of Education.
2. Idem 1.
3. La réforme de l'enseignement supérieur, Ministry of Higher Education 1971.
4. Idem 1.
5. Project of reform of secondary schools, Ministry of Education, 1983.
6. Lawton, D., An Introduction to Teaching and Learning, Hodder and Stoughton, London, 1981.
7. Tyler, R., Basic Principles of Curriculum and Instruction, Chicago, London, 1948.
8. Nichols, A., and Nichols, H., Development of a Curriculum: a Particular Guide, Allen and Unwin, London, 1972.
9. Marchant, E.C., The teaching of Geography at school level in Europe, Harrap, London, 1971.
10. Idem 8.
11. Long, M., and Robertson, B.S. Teaching Geography, Heinneman, London, 1966.

CHAPTER FOUR

TEACHING RESOURCES IN ALGERIAN SECONDARY EDUCATION

As suggested in Chapter Three, the basic resources of Secondary Education consist of teachers, as a dynamic element, and material resources, as a necessary back up. This chapter attempts to evaluate the supply and quality of teaching resources.

4.1. Geography in the Social Sciences Group.

The Social Sciences group in Algeria consists of three subjects, Geography, History and Educational Studies. Whereas teachers are usually trained in only one of these subjects they are expected to teach in all three. Geography teaching suffers particularly as it requires some degree of skill in scientific knowledge and yet it is commonplace for the teachers responsible for Geography to have little or no training in this area. The same situation applies to the other two subjects in the Social Sciences group. The problem is exacerbated by the fact that Algerian society has changed so rapidly and therefore it is the role of Social Scientists to explain and interpret

these changes to pupils rather than simply to encourage memorisation of facts. This in turn should encourage children to understand cause and effect in society, to examine their own role in society and to engage in problem-solving exercises.

Geography has a key role in the social sciences in terms of understanding society and this often conflicts with the necessity to cover such a large curriculum and inevitably a reliance on memorisation. In this situation, the pupil becomes simply a receiver rather than gaining deep understanding. The 1976 National Charter stressed the need to prepare citizens with an awareness of a range of intellectual disciplines, critical ability and as a support for socialist convictions - thus the role of the teacher is to "light candles" of understanding, which makes teaching an art. In spite of the clarity of the 1976 National Charter and reforms in 1988, few teachers have the ability, time or materials to stimulate pupils, develop their ideas, not only concerning Algeria but the outside world.

4.2. The characteristics of Geography teaching.

At a conference held in Algiers in June 1989, teachers

complained that the Secondary syllabus consisted of a collection of units without regard to pupils' interests and abilities or stimulating inquiry in pupils minds. It was this complaint which had engendered the strikes by Secondary School Teachers in May 1989, demanding participation in discussions for reform, as they were disappointed by what had happened in the 1983 attempted reforms. As mentioned in Chapter Three, the situation has been greatly complicated by the introduction of Arabization without regard to the supply of teachers competent in this language and without an appropriate supply of teaching materials in Arabic. Moreover, the exclusion of Geography from the Science Baccalauréat in 1971 was a further disincentive for specialised Geography teachers to enter the profession. Furthermore, the decision to change the university Geography Department to the name of Institute of Earth Sciences, with consequent emphasis on scientific aspects encouraged Geography graduates to apply for jobs in the industrial sector rather than to enter the teaching profession. As the number of pupils in school has increased rapidly the problem has become more acute - fewer and fewer trained geography teachers to teach more and more pupils. The inevitable result is that an increasing proportion of pupils are taught by teachers who have no training in Geography at

all.

4.3. The role of the Ecole Normal Supérieur.

The role of the Ecole Normal Supérieur (ENS) was established by the Ministry for Higher and Secondary education for the purpose of identifying the needs in secondary schools for qualified and specialised teachers in all subjects. In principle the trainee teachers complete three years of study full time and the fourth year is spent on teaching practice under the supervision of experienced teachers, coordinated by the Chief Inspector for the subject. During this period trainee teachers receive a half salary in the first two years and a full salary in the third and fourth years as an incentive to enter the teaching profession at secondary level.

In practice, there is little coordination between supply and demand. Many historians are trained without any knowledge of Geography, which is necessary for teaching many aspects of history, whereas many teachers are trained in subjects such as Arabic and French, where the job prospects in teaching are poor, there is a lack of training of Geography teachers where the needs are very high. This reflects a

lack of planning on the part of the Ministry. The criticism may be extended further as the ENS still trains teachers in very traditional methods, with little reference to new teaching approaches, theoretical developments and child psychology. In spite of its considerable resources, the ENS is failing in its mission to produce geography teachers in the quantity and quality required.

4.4. The influence of the "Coefficient".

All subjects in Algerian Secondary Education as allocated a coefficient; a weighting which is applied to the teaching and examination of each subject. This coefficient affects pupil's perceptions of the value of a particular subject and to concentrate their work on the subjects with the highest coefficient in the Baccalauréat examinations. The impact of these coefficients is illustrated in Table 4.1. with respect to the Mathematics branch.

Table 4.1.

Coefficients in the Mathematics Branch Curriculum

Subject	First Year		Second Year		Third Year	
	Time (Hours)	Coeff.	Time (Hours)	Coeff.	Time (Hours)	Coeff.
Mathematics	6	8	6	8	8	8
Physics	5	7	5	7	5	7
General Science	2	2	2	2	2	2
Arabic	3	2	3	2	3	2
Religion	1	1	1	1	1	1
Philosophy					3	2
History	1.5	1	1.5	1	1.5	1
Geography	1.5	1	1.5	1	1.5	1
Politics	1	1	1	1	1	1
French	4	2	3	2	2	2
Second Language	3	2	3	2	2	2
Physical Educ	2	1	2	1	2	1

From Table 4.1 it can be seen that Mathematics and Physics dominate the weighting and pupils inevitably concentrate their work in those subjects. Conversely it is difficult to understand why General Science is allocated a coefficient

of 2, the same as many of the literary subjects. Not surprisingly, all the subjects with a coefficient of 1 are considered as unimportant.

We can compare the situation in the Mathematics Branch with that in the Science Branch.

Table 4.2.

Coefficients in the Science Branch Curriculum

Subject	First Year		Second Year		Third Year	
	Time (Hours)	Coeff	Time (Hours)	Coeff	Time (Hours)	Coeff
Mathematics	4	5	4	5	6	5
Physics	5	5	5	5	5	5
General Sci	5	5	5	5	5	5
Arabic	3	2	3	2	3	2
Religion	1	1	1	1	1	1
Philosophy					3	2
History	1.5	1	1.5	1	1.5	1
Geography	1.5	1	1.5	1	1.5	1
Politics	1	1	1	1	1	1
French	4	2	3	2	2	2
Second Lang	3	2	3	2	2	2
Physical Educ	2	1	2	1	2	1

From Table 4.2 we see that the three basic science subjects are given a coefficient of 5. Subjects with a weighting of 2 are regarded as helpful but subjects with a coefficient of 1 are considered unimportant.

Finally, the weighting of the literature branch is shown in Table 4.3.

Table 4.3.

Coefficients in the Literature Branch Curriculum

Subject	First Year		Second Year		Third Year	
	Time (Hours)	Coeff	Time (Hours)	Coeff	Time (Hours)	Coeff
Mathematics	3	2	2	2	2	2
Physics	2	1	2	1	2	2
General Science	2	1	2	1	2	2
Arabic	7	4	7	4	4	4
Religion	1	1	1	1	1	1
Philosophy					8	6
History	2	2	2	2	2	2
Geography	2	2	2	2	2	2
Politics	1	1	1	1	1	1
French	5	3	4	3	3	3
Second Lang	5	2	5	2	4	3
Physical Educ	2	1	2	1	2	1

Table 4.3 shows that the highest coefficients are given to Philosophy and Arabic Literature, whereas History and Geography, traditionally strong literary subjects are given a low coefficient. This is also in spite of the fact that Philosophy is a new subject and is not studied until the third year. Finally we can consider the case of the Islamic Science Branch. This was introduced in 1984 as a response to the need to train pupils across a broad spectrum of knowledge to meet national needs. In practice it differs little from other branches in curriculum other than in the prominence given to Islamic studies and confuses pupils, teachers and parents alike in the aims and objectives.

Table 4.4.

Coefficients in the Islamic Science Branch Curriculum

Subject	First Year		Second Year		Third Year	
	Time (Hours)	Coeff	Time (Hours)	Coeff	Time (Hours)	Coeff
Mathematics	4	5	4	5	6	5
Physics	5	5	5	5	5	5
General Sci	5	5	5	5	5	5
Arabic	3	2	3	2	3	2
Religion	6	6	6	6	4	4
Philosophy					3	2
History	1	1	1	1	1	1
Geography	1	1	1	1	1	1
Political Educ	1	1	1	1	1	1
French	3	2	2	2	2	2
Second Lang	2	2	3	2	2	2
Physical Educ	2	1	2	1	2	1

Table 4.4 indicates a basic emphasis on Science and Islamic Studies, but Geography and History which underpin the spread and context of Islam are given a very low coefficient and few contact hours.

An examination of the four alternative curricula reveals many contradictions. In the Literature Branch, Geography has the same weighting as Mathematics, Physics and General Science which do not even feature in the Baccalauréat examination, whereas Philosophy has the highest coefficient even though it is not taught until the final year. Whereas all the branches have twelve subjects in the curriculum, pupils naturally only concentrate on the two or three subjects with the highest weighting. The effect on Geography teaching is particularly serious since there is no third year teaching in the Science Branch and a very low coefficient in the other branches. This inevitably affects the Ministry's attitude to Geography teaching.

4.5. The impact of "coopérant" teachers.

The policy of using "coopérant" (overseas) teachers resulted from two main reasons. Firstly, from an economic point of view, Algeria launched its national development planning in 1967. The use of cooperant teachers was expensive and so priority was given to technical and scientific subjects which were seen as national priorities on a short term basis. Secondly, at a political level, the use of overseas

teachers was seen as a means of introducing Arabization in secondary and higher education from 1971 onwards, and stimulating national awareness especially in the social sciences by favouring the national language. In turn this was a contradiction in that Algerian History should logically be taught by Algerians rather than by outsiders.

In spite of this, overseas teachers were drawn from Egypt, Syria, Iraq and Palestine, where ideology and beliefs were different, their notions of Algerian History and Geography imperfect and where the motivation was employment rather than genuine educational principles. Table 4.5 indicates the trend in the numbers and proportions of Algerian teachers vis-a-vis cooperants.

Table 4.5.

The Evolution of Algerian Teachers 1966-86

Academic Year	Algerian Teachers		Coopérants		Total
	No	%	No	%	
1966 - 67	799	30.6	1811	69.4	2610
1984 - 85	14,502	78.7	3916	21.3	18,416
1986 - 87	22,411	85.4	3827	14.6	26,236

Source: Ministry of Education, Director of Statistics and Planning, June 1988

Table 4.5 shows that in 1967 Algerian teaching was dominated by almost 70% of foreign teachers, but that by 1988 over 90% of teachers were native Algerians. Those remaining are mainly in Scientific and Technical subjects. Geography and History are now taught exclusively by Algerians but a legacy of the past dominance of coopérants is a reliance on memorisation techniques. Much was expected of overseas teachers in terms of introducing new techniques but in fact this only happened in the case of French coopérants and by those teachers who had been educated in French. The problem was also compounded by the fact that most of the Arabic coopérants taught in classical Arabic rather than the vernacular Algerian Arabic which made for severe learning problems. Not only had some of the teachers no experience in teaching Geography but no experience of teaching at all. In a more positive sense, the difficulties of using overseas coopérants hastened the process of training Algerian teachers as a high priority, as was specifically stated in the National Charter which declared that "the system of education and training should be national in its content, democratic at all levels, modern and scientific in its

nature".

4.6. The growth in the school population.

In addition to all the problems listed above, the growth in school rolls has had a particularly damaging effect on Geography, which requires group teaching and practical methods. Table 4.6 shows the growth in the number of pupils in both General and Technical Secondary Schools. The number of pupils per class has grown from an average of 30 to 50 and in some large cities like Algiers to 60.

Table 4.6.

EVOLUTION OF STUDENTS IN SECONDARY SCHOOLS 1963-1986

Academic Year	General Secondary Schools	Technical Secondary Schools	Total
1963 - 64	2400		
1964 - 65	7,636	1,397	9,033
1966 - 67	12,368	2,914	15,282
1968 - 69	17,768	4,022	21,790
1970 - 71	29,212	6,786	35,998
1972 - 73	37,947	7,854	45,801
1974 - 75	66,655	9,142	75,797
1976 - 77	101,806	11,410	113,216
1976 - 79	142,526	11,904	154,430
1980 - 81	107,455	14,493	211,948
1983 - 83	259,442	19,857	279,299
1984 - 85	316,272	42,577	358,849
1985 - 86	356,616	66,886	423,502

Source: Direction of Statistics, Ministry of Education

It should be stressed that the reform of Secondary Education which started in 1984 concentrated on the Technical lycees to the detriment of General Lycées, whereas the actual number of pupils increased more rapidly in the General Lycees. Geography teachers suffered particularly because they had large classes, at many different levels involving a large amount of lesson preparation and examination classes. Other subjects with fewer timetabled classes had fewer difficulties. The quality of teaching deteriorated because of the impossibility of conducting practical work and fieldwork with such large classes. The problem is so acute that Geography teachers often cannot recall their pupils names or recognise their faces. In turn this prevents the teachers from conducting their natural role of understanding a pupil's background, motivation and behaviour. It becomes impossible for a teacher to get to know a pupil's strengths and weaknesses and thus teaching just becomes a job rather than a professional endeavour.

The problem of rapid growth in numbers is also compounded by the lack of coordination with pupils subject interests. This has a crucial effect on pupil's motivation in the classroom, which in turn affects relationships between

teachers and pupils. Thus the Geography curriculum consists of a large number of compulsory units which does not give the teacher the opportunity to experiment with projects to increase pupil's interest. It is difficult to assess pupil's real ability if their interest has not been stimulated. In this sense, pupils may not be able to fully express themselves nor is it possible to stimulate completely the potential for self-learning from such media as TV magazines and the press. The inclusion in the syllabus of the Algerian Agricultural Revolution, even though it is now a "dead letter" is a good example of the manner in which pupil interest can be reduced. The same kind of problem incidentally affects teaching in political education as the syllabus states that single party rule is the only way to progress and yet the political troubles of 1988 caused the ruling party (FLN) to create political reform in 1989 and there are now 22 new parties in Algeria and democratic elections will take place in 1991. The Geography programme does not take into account this fundamental constitutional reform. The problem of maintaining interest in an inert programme in a country experiencing rapid social change was tested in a sample of 200 school pupils in Algiers at Third Year level. The results are shown in Table 4.7.

Table 4.7

PUPIL'S EXPRESSION OF INTEREST IN TIME GEOGRAPHY PROGRAMME		
Not Interested	Interested	No reply
151 (75.5%)	35 (17.5%)	14 (7.0%)

Source: personal inquiry, sample size 200

Table 4.7. indicates a low degree of interest in Geography. Interviews with pupils revealed that there was widespread discontent with both the content of the curriculum and the methods of teaching. In these circumstances it is logical for pupils to be more interested in subjects which carry a higher coefficient in Baccalauréat, an attitude reinforced by parents. The exclusion of Geography from the Science Baccalauréat examinations virtually excludes interest on the part of those pupils. This was a decision taken centrally by the Minister against the advice of the Chief Examiner and without consulting teachers. The explanation given was that the Third Year Science curriculum was overloaded, but this was an arbitrary decision rather than being based on a sound reappraisal of the system as a whole.

The combination of increased pupil numbers, the lack of pupil interest and the low Baccalauréat status with no reduction in the content and length of the curriculum inevitably leads to adverse pupil reaction. The same sample of 200 pupils was tested for reaction to the length of the Geography programme in relation to the time table allocation.

Table 4.8

PUPIL'S REACTIONS TO THE LENGTH OF CONTENT OF THE GEOGRAPHY PROGRAMME

Programme too long	Acceptable	No opinion
150 (75%)	20 (10%)	30 (15%)

Source: personal inquiry, sample size 200.

Table 4.8 shows that the vast majority of pupils consider that the curriculum is too long in relation to the content that has to be covered, the time available in the timetable and the low coefficient accorded to Geography in the Baccalauréat examination. The timetable does not allow sufficient time for the effort required to complete the syllabus. Pupils also criticised the lack of materials as

a further factor diminishing their interest in the subject.

In spite of this lack of interest pupils did not consider that Geography was an unimportant or irrelevant subject, either academically or in relation to their daily life. Inquiries carried out in 1988 and 1989 revealed that 88% of pupils considered that Geography was an important subject at all levels of education.

Table 4.9

PUPIL ATTITUDE TO THE IMPORTANCE OF GEOGRAPHY

Very Important	Important	Not Important	No Opinion
176 (88%)	20 (10%)	4 (2%)	0 (0%)

Source: personal inquiry, sample size 200

Thus the problem is not that pupils consider Geography unimportant, but simply that they do not consider the programme stimulating nor is the examination given sufficient weight. This requires teachers to teach with more imagination, more scientific rigour and with a clearer idea of their objectives. In this they are frustrated by the attitude engendered by the Ministry's coefficients which automatically divide subjects between useful subjects and

subjects of no great value. Geography is at best regarded as a complementary subject, and in the Science Baccalauréat as of no value. This undermines the value of Geography as a subject in its own academic right but also as a preparation for citizenship in general. To this end, Geography should be an active subject, on the Piaget model, rather than simply acquiring knowledge. In this way, a pupil is stimulated to think for himself, experiment and come to conclusions under the teacher's guidance. Children are naturally curious and able to make discoveries for themselves. To this end, the teacher's roles are as facilitators rather than providers of ready made knowledge, to enable pupils to be creative and to grow socially, morally and spiritually.

4.7. Teacher's Qualifications

The role of the teacher is crucial in any education system and in the formation of society. It is crucial, therefore, that the teacher has more than just academic knowledge, but also skills as a motivater, an understanding of educational philosophy and an ability to relate to pupils abilities, difficulties and backgrounds. In the case of geography teachers' additional requirements are to train pupils to

select appropriate information, to compare, classify, to search for patterns, to apply concepts and generalisations.

Many Geography teachers lack this training and vision, lack even a basic understanding of the use of maps and cannot maintain class discipline. This all stems back to the fact that many teachers have no formal qualification in Geography at all and are incapable of managing and dominating the classroom. In fact Geography is a very demanding subject to teach, both within itself and in its relationship to other subjects such as Economics, Mathematics etc. Teachers must be aware of very complex environmental relationships for example and it is unthinkable that teachers untrained in Geography can teach this subject matter and consequently very little interest in the subject that they are teaching. Table 4.10 indicates that 90% of Geography secondary teachers teach the subject not out of interest but because jobs were not available in other subjects.

Table 4.10

TEACHERS EXPRESSION OF INTEREST IN GEOGRAPHY

Very interested	Quite interested	Interest	Not interested
0	4	6	90

Source: personal inquiry, sample size 100 teachers

These statistics correlate almost exactly with the proportion of qualified teachers. 89.18% of Secondary Geography school teachers have no qualification in the subject and did not want to become Geography teachers. Not surprisingly, although pupils regard Geography as important, they are not encouraged by untrained and unmotivated teachers. It is also unsurprising that pupils should perform so badly in examinations and that the author's own inquiries reveal that the majority of pupils in the Third Year are incapable of drawing an accurate map of Algeria, or to present statistics in diagrammatic form.

Table 4.11

TEACHERS SUBJECT OF QUALIFICATION, TEACHING GEOGRAPHY IN ALGERIA

Discipline	Number	%
History	248	72.54
Geography	33	9.64
Law	19	5.55
Sociology	8	2.33
Art	7	2.04
Unqualified	10	2.92
Finance	5	1.45
Education	4	1.17
Islamic Science	4	1.17
Geography - History	4	1.17

Source: Ministry of Education, teacher's dossiers.

Table 4.11 indicates that there are ten differently qualified categories of geography teachers teaching Geography in Secondary Schools in Algeria. It shows that 89.18% of the teachers have no formal qualification in Geography, nor in most cases did they wish a teaching

career. Moreover, social science teachers are required to teach three subjects - Geography, History and Political Science, which diminishes their interest in Geography even further. Even at a broader level of the role of social sciences to prepare future well-informed citizens, the poor level of qualification and motivation makes this almost impossible. In particular, those skills within Geography which increase awareness of the environment, society and the outside world cannot be communicated by unskilled teachers unable or unwilling to promote fieldwork, self-discovery, observation, data analysis etc.

Many of the teachers are ignorant of the goals defined in the Ministry of Education for the Geography curriculum. The seminar organised by the author in Algiers revealed the following results.

Table 4.12.

TEACHERS' APPRECIATION OF THE GOALS OF THE SECONDARY GEOGRAPHY PROGRAMME

Aims are very clear	Aims are clear	Aims are unclear	Do not understand aims	No opinion
7	12	36	30	15

Source: personal inquiry, sample size 100 teachers.

Table 4.12 shows that 45% admitted that they were unaware of the goals and do not even prepare their lessons to meet any goals. Only 19% expressed the view that they knew what the aims were, but 36% have little idea and have no way of knowing if they are achieving these aims.

In summary, the seminar, and questionnaire work in schools revealed seven major problems; the difficulty in completing the syllabus, the difficulty of maintaining pupil's interest and controlling the class, the inability to use teaching materials, the lack of adequate materials, poor teacher-pupil relationships, the low value placed on Geography in

the curriculum and the lack of continuing training within schools. Many of these problems could be solved if the teachers had been properly trained. It is possible to improvise teaching materials and to borrow equipment from the science laboratories, but to make up deficiencies the teachers need to have had proper training. At the very least, it would improve matters if unqualified teachers received in-service training but in practice there are not enough experienced Inspectors, and many are experienced in out of date methods or have no Geography background at all.

It is clear that a major factor in the poor performance of Algerian secondary school pupils in Geography is the effect of unqualified teachers. An experiment carried out with Third Year pupils showed that many cannot draw an outline map of Algeria and many cannot even identify the national boundary.

Table 4.13.

PUPILS ABILITY TO DRAW AN OUTLINE MAP OF ALGERIA		
Able to draw map	Unable to draw map	Did not try
26 (13%)	164 (82%)	10 (5%)

Source: personal inquiry, sample size 200 Third Year Pupils

This reflects not only the lack of qualification but a dependence on oral learning without reference to practical study. Moreover, the teachers relied very highly on memorizing rather than discussion.

Table 4.14.

LEARNING METHODS USED IN GEOGRAPHY CLASSES

Memorizing	Discussion	No response
168 (84%)	22 (11%)	10 (5%)

Source: personal inquiry, views of 200 Third Year Pupils

The reliance on untrained teachers goes a long way to explaining poor results, but another factor is the method of examining at Baccalauréat level.

4.8. The effect of the Baccalauréat examination.

Although the author has identified untrained teachers as a major problem, it is relevant to inquire as to whether the Baccalauréat examination is conducted in such a way as to give a true picture of pupil's abilities. In particular the

wording of questions, the length of question and the actual difficulty of the questions may directly affect pupil performance. Accordingly, the author conducted two experiments involving a sample size of 500 pupils of age 18. The pupils were presented initially with a sample of an official Baccalauréat question, followed by essentially the same question in reworded but clarified forms. This was designed to test the importance of the actual language used, and key words employed, as factors influencing performance. Key words can be crucial in pupil's understanding of a question. For example in the case described below, the replacement of the term "desertification" by "advance of the sand" brings about an improvement in performance.

Table 4.15

THE EFFECT OF CHANGING KEY WORDS - EXAMPLE 1

Original question (Baccalauréat 1981)	Correct %
"The Sahara represents more than three-quarters of the Arab World's surface. Clarify the danger of desertification and how to combat it, and what in your opinion are the best ways to invest in the Sahara"	16
Simplified question 1. "The Sahara represents more than three-quarters of the Arab World's surface. Clarify the danger of the advance of sand and how to combat it, and what are the effective ways of investing in the Sahara"	40
Simplified question 2. "The Sahara represents more than three-quarters of the Arab World's surface. 1. Clarify the danger of the advance of sand 2. How can the advance of sand be combatted% 3. What are the effective ways to invest in the Sahara?	60

Source: Experiment conducted with 500 pupils

The elimination of key words like "desertification" and the removal of the expression "in your opinion" (which confused pupils) led to a great improvement in performance without sacrificing the essential content of the question. A second example of the importance of question phrasing is shown in Table 4.16.

Table 4.16.

THE EFFECT OF CHANGING QUESTION FORMAT - EXAMPLE 2

Original question (Baccalauréat 1984)	Correct %
"Capitalist States praise what they call the Brazilian Economic Miracle under the role of Multi-national Companies in the Brazilian economy"	
Review the text and highlight the role of multi-national companies in the Brazilian economy	18
Simplified question. "Capitalist states praise what they call the Brazilian Economic miracle under the role of multi-national companies in the Brazilian economy. 1. Explain the meaning of this paragraph 2. Clarify the role of multinational companies in the Brazilian economy	42

Source: Experiment conducted with 500 pupils.

In the above case, pupils were confused by the word "review" in the original question. Some pupils gave an exploration of the Brazilian economy, others gave a more general discussion of the economy, while some simply wrote all they knew about Brazil. In the simplified question the substitution of "explain" for "review" and "paragraph" for "text" improved performance. Similarly, the introduction of "separated" questions rather than long, complicated sentences leads to an improvement in performance. Clearly the language and structure of questions are an important factor in pupil's success rate.

A further experiment may be considered where statistical data and a simple map are introduced.

Table 4.17.

THE EFFECT OF CHANGING QUESTION FORMAT - EXAMPLE 3

Original question, Baccalauréat, 1983 — Correct %

"The USA is the leading country in agricultural production which it uses as a weapon for its influence on most countries of the world. The table below explains the importance of agrarian production in the USA.

Year	1946	1955	1970	1974	1982	1983	
Wheat	31,381	25,440	36,874	84,885	76,538	66,610	13%
Maize	82,552	82,039	105,463	118,461	212,336	106,786	
Tobacco	1,053	995	864	903	899	640	

Unit 1,000 tons

A. Use these figures on a diagram, by a graph, and comment, then clarify by focussing on the range of agrarian production.

B. Highlight on the USA a map of the zones of Agricultural production given in the Table above, comment on the factors influencing the distribution of the agricultural zones.

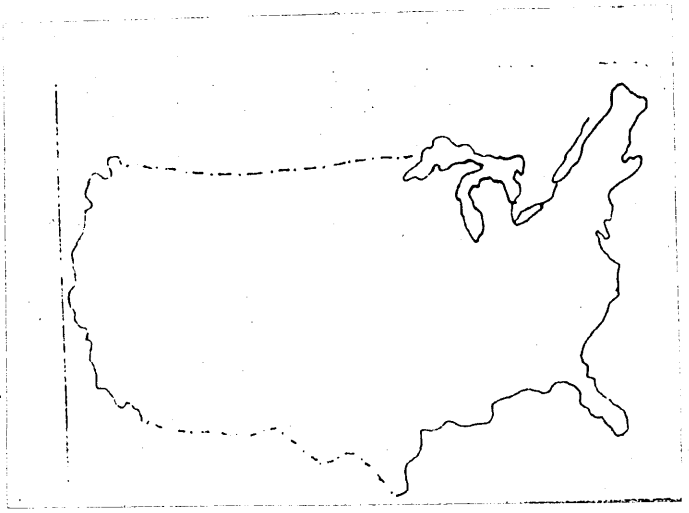


Table 4.18.

THE EFFECT OF CHANGING QUESTION FORMAT - EXAMPLE 3

Simplified question.	Correct %
"The USA is the leading country in the agricultural area. The Table below illustrates the importance of agrarian production in the USA."	
Data as in Table 4.17	
You must:	
A. Convert the figures into a graph	
B. Study the Table above	
C. Clarify the factors influencing agricultural production	48
D. Highlight on the map the zones of production of wheat, maize and tobacco	
E. Give reasons for the distribution of these zones of agricultural production	

Table 4.17 and 4.18 indicate that pupils had more difficulty with wordy and unclear questions. It must also be realised that pupils have only a short time to read the information, to think, to recall information and to organise an answer. It is obvious that shorter, clearer questions give a pupil a better chance of improving their performance. It is necessary to eliminate unnecessary wordiness, to organise questions logically and to avoid complexities in the language used. This result was confirmed by the author's experiments in several schools in Algiers. Specifically, the exclusion of the phrase in Table 4.17 "which it uses as a weapon for its influence on most countries of the world" improved pupil performance as it eliminated an unnecessary complication which is not central to the knowledge being tested. Similarly, the subdivision of the question into headings A,B,C,D, and E clarifies the point of the question and clarifies the pupils thinking.

A further example may be given where the length of the question is an obstacle to pupil performance.

Table 4.19.

THE EFFECT OF CHANGING QUESTION FORMAT - EXAMPLE 4	
Original question (Baccalauréat 1985)	Correct %
"In the mid 1950's there were many economists, Agrarian experts and politicians who expected that the "Green Revolution" in India would overcome the demographic explosion and unemployment in rural areas. They believed that the modernisation of agrarian methods would result in the transformation necessary to speed the transition to industrialisation" From this text, explain to what extent the "Green Revolution" in India achieved the balance between food security and the demographic explosion."	21

Table 4.20

THE EFFECT OF CHANGING QUESTION FORMAT - EXAMPLE 4

Simplified question.	Correct %
"In the mid 1950s it was expected that the "Green Devolution" in India would overcome the "demographic explosion" and employment problem in rural areas and by the modernisation of the agrarian areas to speed the transition to industrialisation". Considering the above text:	
A. Explain the aims of the "Green Revolution" in India	51
B. Clarify the result of the "Green Revolution" on the balance between food security and the demographic explosion.	
C. Explain the effect of the "Green Revolution" on the industrial structure.	

The simplified question reduced the length of the text, clarified the issues by breaking the question into stages, and produced a better performance without losing any of the

demands of the question. It also economised on pupil's use of time and was more clearly related to what pupil's had studied in the Geography programme. Several more questions, drawn from the same experimental survey reinforce how crucial the form in which questions are posed may be as a factor in pupil performance. The next example, Tables 4.21 and 4.22 illustrate the case of analysing statistics.

Table 4.21

EFFECT OF CHANGING QUESTION FORMAT - EXAMPLE 5

Original question (Baccalauréat 1984) Correct %

"You have two Tables. The first represents the oil importation of both the USA and the EEC and the second represents the increase in oil prices on the international market during the last decade".

Table 1 Oil imports, 1,000 tons

	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981
USA	228	298	590	312	372	446	414	410	323	287
EEC	556	599	572	492	531	490	484	487	438	358

Table 2 Dollar price

1970	1972	1974	1978	1979	1980
1.8	2.6	11.6	12.7	18-23.5	24-35

A. Use the statistics in the two tables in a diagram

B. Study the two tables and compare them

C. The correlation between the unstable dollar and the price of oil 6%

The very poor pass rate reflects pupil's inability to understand statistical comparison and to draw diagrams from two tables. It is obvious that the time periods of the two tables do not coincide, which is confusing, with the nature of the data for dollar prices being expressed differently in 1979 and 1980. It is also confusing to draw diagrams of different values (tons and dollars), nor does the question make clear what problem is being posed in the question, nor how it relates to the classroom lesson in the programme.

Table 4.22

THE EFFECT OF CHANGING QUESTION FORMAT - EXAMPLE 5

Simplified question.	Correct %
"You have two tables. The first represents the development of oil imports of both the USA and EEC and the second represents the increase in oil prices on the international market during the last decade."	
Table 1 Oil imports 1000 tons	
1972 1974 1978 1979 1980	
USA 228 290 414 410 323	
EEC 556 572 484 487 438	
Table 2 Price of oil in dollars	
1972 1974 1978 1979 1980	
USA 2.8 11.6 12.7 18-23.5 24-35	
A. Study the two tables and compare them	
B. Clarify the effect of increased oil prices on industrialised and third world countries	69
C. Clarify the importance of increased oil prices on the Algerian economy	

Reorganising the tables in terms of making the years consistent improved performance, as did making the questions relate directly to the data and to the Algerian situation covered in the Geography programme.

The experiments described above strongly support the view that the actual presentation of Baccalauréat papers significantly weakens pupil's performance. The most serious deficiencies are:-

1) Some questions are too long and contain language that makes it difficult for the pupil to determine the meaning of the question.

2) The inclusion of questions that require the drawing of graphs often is beyond the pupil's practical experience and takes up too much of the examination time allowed.

3) Some of the questions only relate to one or two class lessons.

4) The inclusion of maps also handicaps some pupils who have not received practical training.

5) Some questions would benefit by reference to Algeria, which is within the pupil's experience.

6) It is evident that there are errors and inconsistencies from marking by the examiners as it is difficult to

establish a scale of marking for questions which produce such a variety of responses because pupils interpret them in a variety of ways.

Having discussed some of the problems associated with human resources, a final chapter now examines the major problem of a lack of material resources.

CHAPTER 5

TEACHING MATERIALS IN SECONDARY SCHOOLS

The previous chapter exposed weaknesses in the teaching and examination situation in Algeria. However, not all of the responsibility can be blamed on the teachers and examiners. The teachers can only be as effective as the material resources to which they have access. Similarly, the demands imposed by the national curriculum should be related to the teaching materials available to the teacher. This chapter attempts to assess the provision of material resources available in the classroom by considering the character of the official text book at Third Year Level and more generally the level of teaching aids available by reference to an inquiry at five selected schools in the Algiers area.

5.1. The role of Textbooks in Geography Teaching

The National Committee for Geography (IPN) has full responsibility for designing and preparing text books in Geography for all stages in Secondary Schools. This

responsibility was defined by Article 58 of the ordinance of 16.04.76 which stated:

"Educational research has the objective of constantly improving the level of education and training, encouraging the continuous revision of teaching methods and integrated training in the teaching environment".

Article 60 of the same Ordinances states the objective of pedagogical research as being:

"the principal objectives of the teaching research institutions are the collection and treatment of documentation on education, training and science related to teaching".

It is clear that the IPN's role is to conduct pedagogique research through specialised committees. Therefore the National Committee on Geography in the IPN is to make up for the lack of materials in Geography at the present time and thus far has concentrated on the final, third year text which is crucial for preparation for the Baccalaureat examination.

The National Committee in Geography consists of four teacher members, supervised by a Geography Inspector. In fact

their qualifications are in History but they have had some experience in teaching Geography and History. On the other hand they have had no experience in conducting padagogical research, have no experience in writing books, and in particular textbooks, which demand sound knowledge of the subject and pupils cognitive development. None of the members had previously produced any published work in Geography or History. Moreover, the Inspector supervising the group has been transferred from Algiers to become Director of Education in Annaba Province, which implies that he can be of little direct help to the Committee and slows down publication (in one case by five years!). The average time to produce one Geography text book is four years and thus a twelve year period to cover the whole of the secondary syllabus in Geography. Such a long period is not acceptable in such a rapidly changing society nor can it take into account innovations in the educational sector. A textbook containing out of date data can only reduce student interest and motivation.

A further criticism is that the National Geography Committee, when constituted in 1985, did not take into account previous work on textbooks, so as to evaluate their strengths and weaknesses, nor did they consult teachers to

gain benefit from their experience with previous books. Neither did the Committee take into account the pupil's needs as "receivers" of the textbook and whether they could learn by involvement and experiment using the text. There is thus a difference between a specific reference book, used as a source, and a textbook which provides new knowledge, stimulates thought and the formation of new values.

Algerian secondary schools, therefore, still suffer from the use of traditional texts which place a premium on memorization and lack the potential for self-study, practical work, comparison, analysis and reasoning. In fairness to the Committee, it must be recognised that it faced fundamental difficulties:

1) The absence of library materials, not only in the IPN library, but in the Algerian book market as a whole. This is critical given that the teachers were without a geographical training and therefore were starting on their task from a very low base.

2) The absence of teaching materials in schools and therefore the difficulty of devising lessons which could be "followed up" using local resources.

3) The absence in Algeria of up to date statistics related to world economic development and therefore the use of

outdated data.

4) The absence of pedagogical evaluation of teaching in Algeria as a whole, making it impossible for the Committee to take into account advances in teaching methods.

5) The absence of any Educational Journal which also isolated the Committee from innovations in teaching, especially in Geography. Nor was their any coordination between the Ministry of Education and the Ministry of Higher Education, which might have filled this gap.

6) The absence of any financial support for the IPN Committee members to carry out experimental work or field trials.

Although the above points may excuse the National Committee for some of its weaknesses, other difficulties arise from the manner in which it conducted its work;

1) It did not conduct any experimental work in schools before constructing the lessons in the textbook. It would have been preferable to gain from teacher's experience and pupil's reactions.

2) The content of the text book does not always reflect the programme aims and content established in the National Programme. The book thus contains much material which is not directly helpful to both teachers and pupils.

3) The actual language and vocabulary used is often unhelpful and confusing. For example terms like "Arab World", "Arab countries", "Arab homeland" are used without definition. Geography needs its own specific vocabulary, clearly understood by teachers and pupils alike.

5.2. The specific requirements of a Geography Textbook.

Before turning to a specific case study of the Third Year Geography Textbook, published in 1985, it is useful to specify what features a set text should possess to be of maximum value.

Above all, an official text should express the essential aims of the National Programme and the cover the subject matter of the examination, given that few schools have any other alternative source of information for the preparation of the final examination. Furthermore, given that education is free and compulsory, the text acts as a standard reference for all pupils. This point is particularly important given the lack of qualified teachers. A standard text puts all pupils on the same basis and can compensate for some of the teacher's weaknesses. Since Algerian teachers do not have the right to substitute an

alternative text, the official text represents educational policy at the national level.

In these circumstances, it is essential that a national textbook should be written by experienced Geography teachers, familiar with the aims and objectives of the National Programme and capable of collecting, selecting and analysing data suitable for the aims of the programme. Given the lack of materials in school, the textbook should be designed to give sufficient materials to avoid loss of time by teachers and pupils in an effort to find alternative information which may be of low value.

The textbook should be sufficiently documented that pupils can use it for homework. By using the same source, pupils are placed on the same basis and can be examined on an equal footing. The book should include sufficient practical material - maps, diagrams, statistics, pictures - so that class room exercises can be carried out. This can be a major factor in stimulating pupil interest through activity.

Having made these general observations we may now turn to a specific analysis of the Third Year Geography textbook, published in 1989 (in Arabic), which incidentally raises

further points about textbook use in general. The title of the book is Geography of the Contemporary World, Ministry of Education, IPN 333pp. It may be stated at the outset that the book is very badly printed, with poor registration of maps and diagrams, and that it is very flimsily bound in paperback form and therefore is very rapidly damaged and disintegrated.

The primary objective of the text should be to cover the National Programme syllabus as defined for the Baccalauréat examination. In fact, in many instances the book, which is in effect an "official" document does not coincide with the lesson modules on which the examination is based. We may cite various examples of this contradiction.

Table 5.1

COMPARISON BETWEEN LESSON MODULE AND TEXTBOOK - EXAMPLE 1

Lesson Module 3	Textbook p.15
1. The concept of "Third World"	1. The situation of the "Third World"
2. The characteristics of "Third World"	2. The interest of underdeveloped countries
3. Problems of the "Third World"	
4. Possible solutions.	

Clearly, the textbook covers only a small proportion of the subject matter required by the lesson module. This discrepancy can be analysed further.

The lesson module goes into considerable detail on Third World problems given that this is an essential theme in an Algerian context. Pupils are expected to gain a particular insight into Algeria's problems and to relate this to both political and economic problems which characterise Third World countries. The official programme also requires pupils to understand the North-South dialogue and how their country fits into this. Similarly, the Third Wodd offers a major opportunity for teachers to enable pupils to

understand the relationship between man and his environment and to use Algeria as a case study. In this sense, the Lesson Module above is logically ordered and can explore Algeria's internal and external relationships. It also widens the pupils' knowledge of the various countries of the world and of a wide range of geographical phenomena.

The textbook is totally lacking in logical relationship to the classroom module. In particular it does not give any guidance on aims and objectives, nor does it progress from essential matters which are fundamental to less essential matters which could be studied if time permits. Fundamentally, the book provides no operational definition of the Third World or any conceptional background. The book simply emphasises effects of underdevelopment without explaining causes. Nor does it refer to the case of Algeria, which pupils know as their homeland. Moreover, there is no map showing the location of Third World countries, simply two graphs and two tables which relate to population, but the economic facts and trends are not included. The textbook is therefore defective in not relating to the lesson module, in lacking an appropriate map or other working materials, contains no suggestions for homework or sample questions and lacks any comparison

between Algeria and other Third World Countries.

From this example of a very broad topic, we may consider a more specific lesson and again compare the lesson module with what is provided by the textbook.

Table 5.2

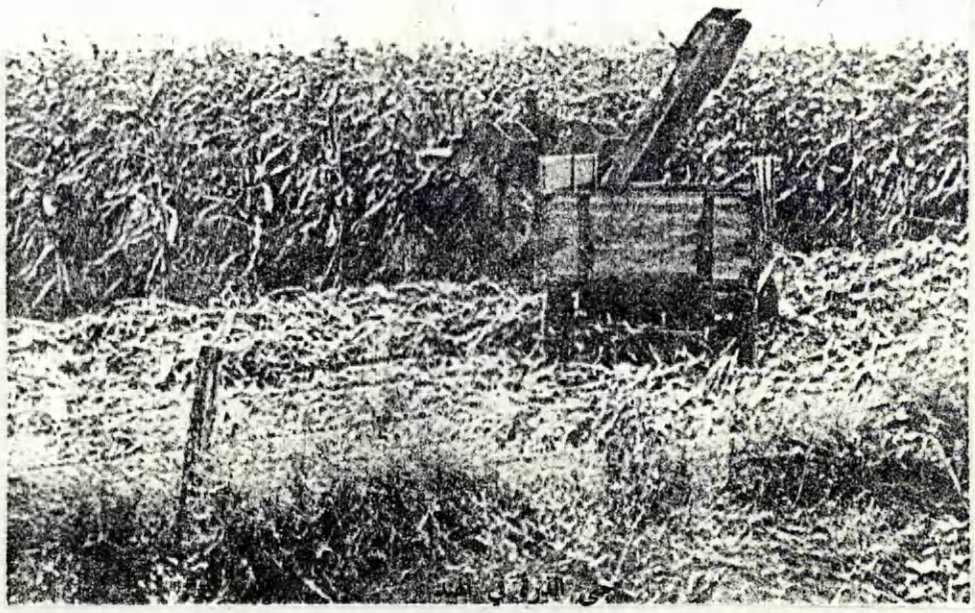
COMPARISON BETWEEN LESSON MODULE AND TEXTBOOK - EXAMPLE 2

Lesson Module 5 - American agriculture

Curriculum	Textbook
1. Physical possibilities	1. Physical and human possibilities
2. Human possibilities	2. Methods and materials of production
3. Production	3. Distribution of production
4. Method of exploitation	4. Agricultural policies
5. Materials of exploitation	
6. Distribution of production	
7. Characteristics and problems	
8. Economics and politics of production	

It is clear from Table 5.2 that the content of the lesson is more comprehensive and detailed than the coverage of the text, and yet the final examination is based on the lesson content. The text simply provides some descriptive information and there is very little geographical analysis or structure. For example there is very little analysis of the physical background - climate, land resources, mountain distribution and rivers i.e. the basic controls of American agriculture. Nor is there any map of physical conditions which would aid pupils to relate production to physical conditions in terms of crop zones.

In more detail, the text book can be further criticised. Although the book was published in 1989, most of the data on American agriculture relates to 1974. There is no comparative data to place American agriculture in context with other countries, or even to measure the significance of agriculture in the American economy. The book pays little attention to the selection of relevant pictures, which can be a powerful force in reinforcing pupils learning. A good example of this is the illustration of corn production, which is a photograph from India included in the chapter on the USA.



Whereas it may be expected that distant lands like the USA might be poorly described, the section of the course dealing with the Arab World should be well presented.

Table 5.3

COMPARISON BETWEEN LESSON MODULE AND TEXT BOOK - EXAMPLE 3

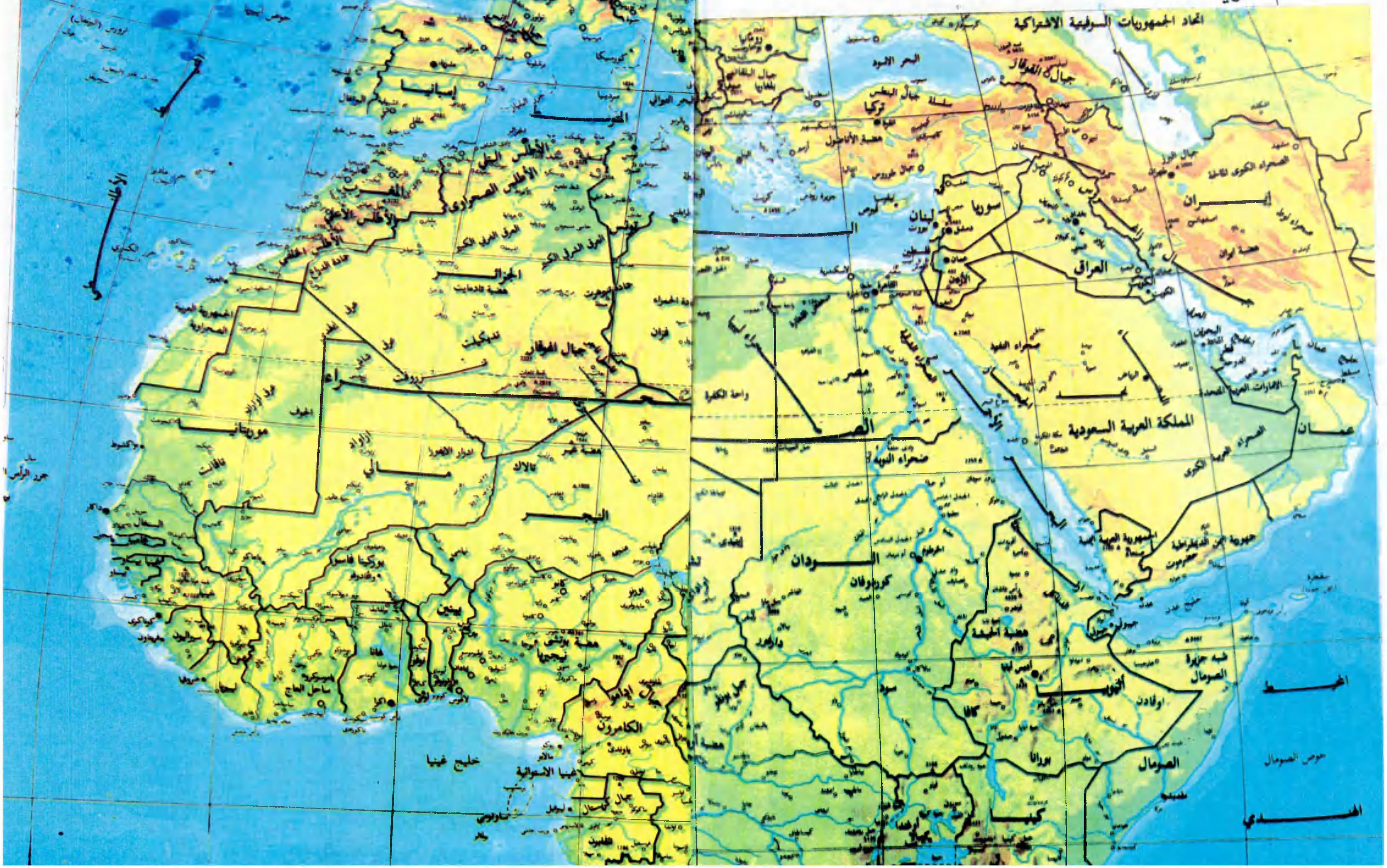
Lesson 23 The Arab countries, physical and human

Curriculum	Textbook
1. Natural and human characteristics	1. Physical geography
2. Evaluation of natural environment and demographic characteristics	2. Climate
	3. Population
	4. Evaluation

In this module there would appear to be some convergence between the curriculum and the textbook. In reality the book has major defects. Crucially, the book neglects any discussion of the significance of the Sahara, the major landscape feature of the Arab World. The text concentrates on mountains and plains whereas the Sahara is the dominant factor in climate and population distribution, not to mention oil resources. Secondly the map which is provided (Figure 5.1) does not include any political boundaries, whereas the lesson module involves a knowledge of the political units. Moreover, the scale of the map, 1:20 million cannot include significant physical detail and in fact covers much of central (non-Arab) Africa and Western Europe. The actual quality of production and registration of the map is very poor. In effect, the map is an obstacle to study rather than an aid.

العالم العربي

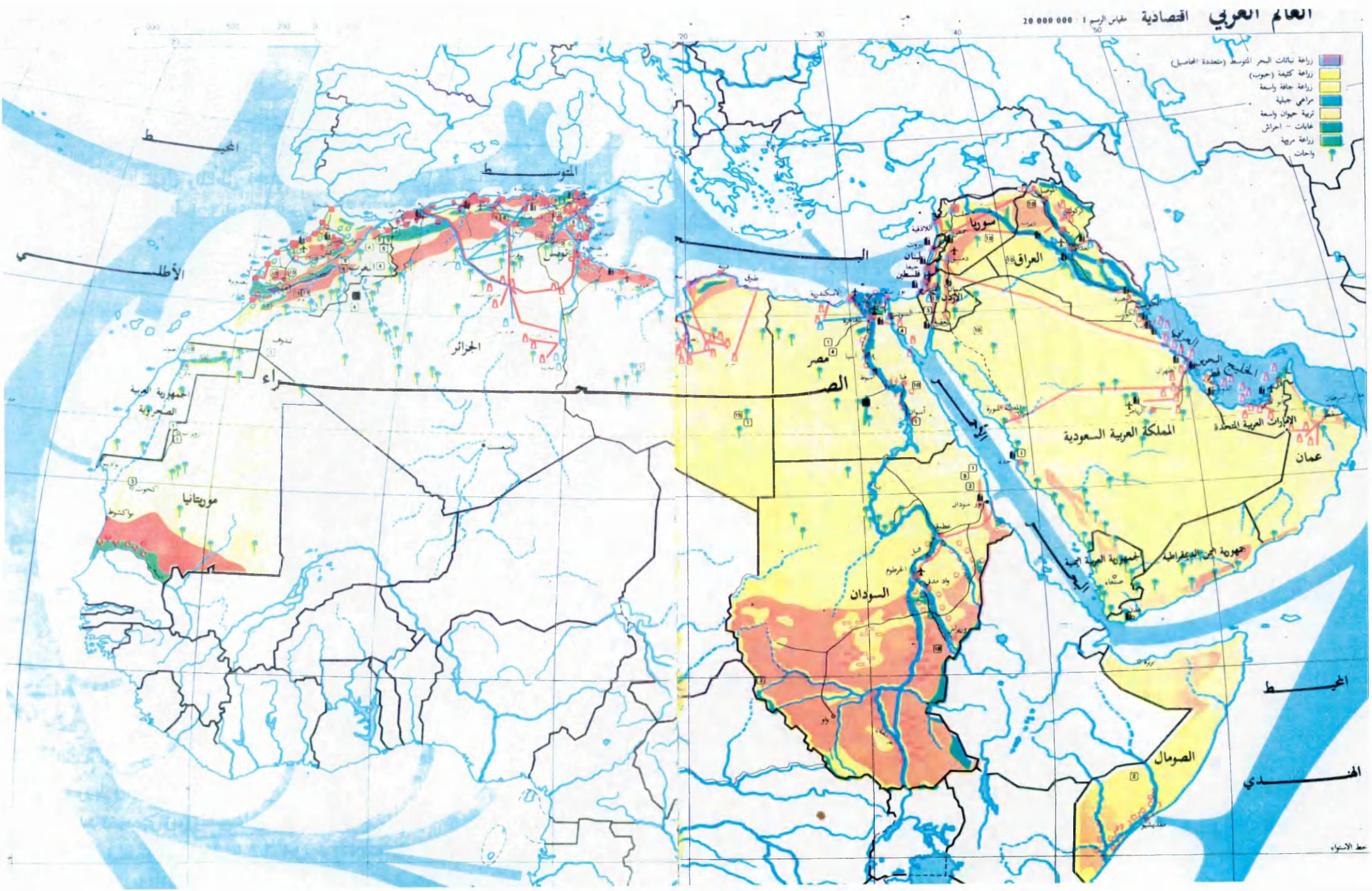
مقياس الرسم 1 : 20 000 000



A further defect of this section of the text is the weakness of the geographical terminology and vocabulary. The mountain ranges of the Maghreb are described as "extending parallel to the sea from south-west to north east and are narrow and low in the east and higher in the west", but gives no explanation as to why this should be so. Similar vagueness attaches to political terms. The book speaks of "various political units in the Arab World but it represents a geographical unit". This gives no concept or insight into the political diversity of the area and confuses pupil's perceptions.

The choice of a map at a scale of 1:20 million is particularly inappropriate. The pupil can gain no understanding of man-environment relationships at this scale and it is difficult to see what practical value such maps have. Maps should be provided at a scale where the pupil can inter-relate facts, ideas, statistics, relationships rather than simply try to memorise very broad factual information which is impossible to relate both to classroom lessons or to examination situations. The map reproduced below (Fig. 5.2) illustrates the deficiencies of the map of the Arab World used in the textbook. This map meets none

of the major requirements - to encourage pupils to discover and analyse, to permit group or separate work, to facilitate understanding, to identify with particular subject matter, to improve tested performance.


العالم العربي اقتصادية
مقياس الرسم 1 : 20 000 000
زراعة نباتات البحر المتوسط (متعددة المحاصيل)
زراعة كثيفة (حبوب)
زراعة جافة واسعة
مراعي جبلية
تربية حيوان واسعة
غابات - احراش
زراعة مروية
واحات
المحيط
المتوسط
الأطلسي
البحر
الصحراء
الجزائر
تونس
المغرب
الجمهورية العربية الصحراوية
موريتانيا
سوريا
العراق
الأردن
مصر
الخليج العربي
المملكة العربية السعودية
الإمارات العربية المتحدة
عمان
السودان
الخرطوم
الجمهورية العربية اليمنية
جمهورية اليمن الديمقراطية
الصومال
المحيط الهندي
خط الاستواء

5.3. Reactions to the textbook

In order to test the reaction of both teachers and pupils to the official textbook, inquiries were made of five schools in Algiers involving 500 third year pupils. The results show a virtual abandonment of the text as a learning tool.

Table 5.4

EVALUATION OF USE OF THE OFFICIAL TEXTBOOK

	Schools					
Use	1	2	3	4	5	Total%
Always	0	0	0	0	0	0
Sometimes	0	0	7	10	0	3.4
Rarely	20	8	12	20	20	16.0
Never	85	96	91	88	86	89.2

Source: Personal inquiry

Table 5.4 indicates that a very large number of teachers never use the book as a first resort, in spite of the paucity of alternative teaching materials. This is a major handicap to acquiring data and for self-study. Moreover,

since many of the teachers are not Geography graduates they have little skill in collecting more relevant teaching material. There is a further psychological factor in that some teachers refuse to use the textbook as it would expose their own weaknesses of knowledge and understanding. A further inquiry was made directly of pupil's reactions to the textbook.

Table 5.5

PUPIL'S VIEWS ON THE UTILITY OF THE TEXTBOOK

	Schools					
	1	2	3	4	5	Total %
Very useful	20	18	25	24	22	21.8
Useful	34	33	35	34	38	34.8
Average	33	34	30	33	34	32.8
Poor	8	10	7	5	5	7.0
Very poor	5	5	3	4	1	3.6

Source: Personal inquiry, sample size 500 pupils in Third Year

This inquiry showed a more positive response to the

textbook, with 21.8% considering that it is very useful and only 10.6% considering that it was poor. However, this reflects a perception rather than a pedagogic evaluation - the pupils welcome a means to study and revise at home i.e. it is better than nothing. This lack of alternative choice is emphasised in Table 5 where pupils were asked to state what sources they used for study in Third Year.

Table 5.6

PUPILS SOURCE OF STUDY REFERENCES						
	Schools					
	1	2	3	4	5	Total %
Textbook	96	97	97	99	99	97.6
General geography books	2	1	0	0	0	0.6
Economic geography books	2	2	2	1	1	1.6
Physical	0	0	1	0	0	0.6

Source: Personal inquiry, sample size 500 pupils in Third Year

Table 5.6 illustrates that pupils use the textbook almost

exclusively in their studies outside the classroom. Specifically, other books in General, Economic and Physical Geography, all included in the curriculum are virtually never consulted. This places an onus on teachers to train pupils to look beyond the textbook, to newspapers and magazines, to collect relevant data.

In summary, the use of the official textbook displays several negative effects, both in terms of teachers and pupils. It is clear that few teachers employ the textbook directly in lessons. Many consider that this would be to show signs of weakness in their knowledge and prefer to regard the book as only for use at home. Others regard the book as being useless because it is out of date and not sufficiently related to the curriculum modules. In practice, given the absence of other resources, teachers would be better advised to use the textbook in class but to complement it with more recent statistics and more appropriate maps. As far as pupils are concerned, lacking alternative material, they are forced to use the book to prepare for their examinations as they have no option.

5.4 Teaching Aids in Schools

The textbook is just one element in the teaching process and given its deficiencies it is essential that it should be complemented by other resources. In order to elucidate the provision of other teaching materials, the author conducted an inquiry of five schools in Algiers and incorporated questions on materials in the seminar held with school teachers in Algiers. The results proved to be extremely depressing.

Six types of teaching material were surveyed in the five schools. These were regarded as the most basic elements required for successful teaching.

1. Maps
2. Visual aids
3. Books
4. Geographical documents
5. Activities
6. Cartographic equipment

The existence or not of these materials is tabulated for the five schools.

5.5. Map availability

Particular attention was paid to the use of maps as these

represent the most basic tool of the geographer.

Table 5.7

AVAILABILITY OF THEMATIC MAPS IN FIVE SELECTED SECONDARY SCHOOLS IN ALGIERS

	Schools				
Maps	1	2	3	4	5
Political	✓	✓	X	X	X
Physical	✓	✓	✓	✓	✓
Climate	✓	✓	X	X	X
Population	X	X	X	X	X
Agriculture	✓	✓	X	X	X
Industry	✓	✓	X	X	X
Relief	X	X	X	X	X
Transport	X	X	X	X	X
Continents	✓	✓	✓	X	X
Vegetation	✓	X	X	X	X
Oceans	✓	✓	X	X	X
Geology	X	X	X	X	X

Source: personal inquiry. ✓ = present X = absent.

Table 5.7 indicates that the poor provision of thematic maps is a serious problem. This applies particularly to the First Year curriculum, General Geography, where reference to thematic maps is essential to clarify locations and make comparisons. The situation appears better in Schools 1 and 2, but this is because they are old schools and have relatively good equipment. However, the maps are all in French and there are none in Arabic. The situation is much worse in schools 3, 4 and 5, which are new schools with new teachers. It is clear that the curriculum design of the Geography Programme did not take into account this paucity of thematic maps. It might be thought that the position would be better with regard to maps of Algeria. Table 5.8 illustrates that this is not the case.

Table 5.8

AVAILABILITY OF MAPS OF ALGERIA IN FIVE SECONDARY SCHOOLS IN ALGIERS

	Schools				
Maps	1	2	3	4	5
Agriculture	X	X	X	X	X
Industry	✓	✓	✓	✓	✓
Climate	X	X	X	X	X
Population	X	X	X	X	X
Political	✓	✓	✓	✓	X
Region	X	X	X	X	X
Transport	X	X	X	X	X
Contour map	X	X	X	X	X
Geology	✓	X	X	X	X
Vegetation	X	X	X	X	X
Urban	X	X	X	X	X
General	✓	✓	✓	✓	✓

Source: Personal inquiry. ✓ = present X = absent

Table 5.8 shows that there are just three kinds of maps available of Algeria in the schools - industry, political

and general. It is not surprising that pupils are unable to draw a map of Algeria nor can they understand the complexity of the country. The absence of relevant maps, and wall maps prevents the teacher from being effective and thus reducing pupil's interest in the subject. The absence of wall maps and map collections would be less severe if other forms of visual aids were available.

5.6 Availability of Audio-Visual Aids

Table 5.9

AVAILABILITY OF AUDIO-VISUAL AIDS IN FIVE SECONDARY SCHOOLS IN ALGIERS

	School				
Aids	1	2	3	4	5
1. Slide projection	X	X	X	X	X
2. TV	X	X	X	X	X
3. Video	X	X	X	X	X
4. Films	X	X	X	X	X
5. Picture collections	X	X	X	X	X
6. Overhead projector	✓	✓	✓	✓	✓
7. Tape recorder	X	X	X	X	X

Source: personal inquiry. √ = present X = absent.

Table 5.9 shows that audio-visual equipment is not available and in fact cannot be found easily on the Algerian market. The only equipment available was overhead transparency projection, but this is used mainly for science teaching. Not surprisingly, Algerian geography teachers have little knowledge of how to use audio-visual aids as a teaching medium.

5.7 Availability of references

Lacking maps and audio-visual aids, pupils need access to other reference material; books, atlases, documents, statistics, magazines, journals, data collected by pupils etc. In fact, the survey results are not worth tabulating since in all five schools there were none of these resources. Even reference material relating to Algeria was totally absent, even though the Geography Programme states that awareness of the homeland is one of the main objectives. Pupils are thus totally reliant on the official textbook and memorisation of the teacher's lessons. There is an absence of materials to up date information or of raw data on which to base practical exercises. It is

thus impossible to stimulate pupils by involving them in classroom projects as there are no materials to base this on and teachers have little experience of organising practical exercises given the lack of documents.

Given this lack of physical materials, an inquiry was made into the use of activities in schools as a means of stimulating interest, e.g. excursions, field work, group projects, games, debates, film shows etc. Again, the results are not worth tabulating since, with the exception of some attempt at map drawing, other activity-based teaching was absent in all five schools.

Finally, a survey was made into the basic infrastructure for Geography in the five secondary schools; the existence of a Geography room, basic equipment such as compass, globe, pens, drawing paper, weather measuring equipment etc. The results were again totally negative. The only equipment available was a world globe; all other items, even mapping pens and tracing paper were absent.

5.8 Conclusion

This chapter has presented a very critical situation in the

material resources available to Geography teachers in general and confirmed by reference to inquiries in five schools. The problem is a complicated one since many items are simply not available on the Algerian market or are prohibitively expensive. Other problems relate to language in that there is a scarcity of appropriate materials in Arabic. Finally, other problems relate back to the question raised in Chapter Four, in that Geography is taught by non-specialists, they have not the motivation or skill to compensate for the lack of materials by collecting data independently, making displays, or producing their own improvised materials. The two problems, of human resources and material resources are thus closely linked and display the gap between what is demanded by the national programme and what resources are available in schools to study it.

CHAPTER SIX

CONCLUSIONS AND RECOMMENDATIONS

This thesis has revealed an alarming state of affairs in the teaching of Geography in Algerian Secondary Schools. The qualifications of teachers are inadequate, the national programme lacks clarity in its objectives, the allocation of time in the curriculum is insufficient, the motivation of both teachers and pupils is low, the necessary teaching materials are absent and the pass rate in Baccalaureat is, unsurprisingly, very low. To make matters worse, no previous research has been carried out to explain this poor performance and to make proposals to remedy the situation. Accordingly, this conclusion attempts to diagnose the problems which have been exposed and to make recommendations for improvement. The problems cannot be cured overnight and thus the actions proposed are those that might be realistically achieved, in terms of time and cost, rather than utopian notions of an ideal world.

6.1 Problems relating to pupils

a. Diagnosis

Third Year pupils in the literature branch were dissatisfied with Geography lessons and in the Scientific branch lacked interest. In general pupils were not satisfied with the curriculum, teaching methods, resources available, the textbook and the low weighting given to Geography in the Baccalaureat. Pupils in the Third Year were unable to draw and analyse maps and were unskilled in analysing statistical data. In field testing, 80% of Third Year geography pupils were unable to draw an accurate map of Algeria or to identify the boundaries with neighbouring countries. Pupils would like to engage in more practical study and fieldwork but this is not provided by the schools. In general, pupils performed better in their school examinations than in the national Baccalaureat.

b. Recommendations

1. The Literature and Scientific branches should have different Geography programmes related to the pupil's academic background and cognitive capacity.

2. General descriptive and memorising methods should be replaced by practical, and field study to stimulate pupils interest and to encourage participation in the classroom as a learning process.

3. The Geography programme should be related to innovations in educational theory and methods. At present it relies on very traditional pedagogic principles.

4. The study of Algeria should be included in the programme in each year, with appropriate maps and data provided so that the pupil fully understands the potential and problems of the homeland which they experience rather than know in an abstract fashion in the case of other world areas.

6.2 Problems relating to teachers

a. Diagnosis

Over 89% of Geography teachers were not qualified in school subjects and nearly 3% had no qualification at all. It was notable that 72.5% of those teaching Geography had qualifications in History. Only 11% of Geography teachers had qualifications in the subject. Over 80% of the teachers are inexperienced, have had inadequate original training and no in-service training. Confronted by the national programme and insufficient time to cover it thoroughly they rely on learning by memorisation. They were further handicapped by not understanding the aims of the programme and being unable to know if they were

achieving their objectives. Moreover, most of the teachers were also responsible for teaching three subjects, History, Geography and Political Education, and had only a limited background or interest in Geography.

b. Recommendations

1. In the short term:

In-service training should be organised during vacation times to develop teacher's geographical skill and knowledge. During term time, seminars should be organised in the schools by Inspectors and by qualified experienced teachers.

2. In the medium term

Recruitment of new teachers should be based on having a qualification in Geography including a period of supervised teacher training.

3. In the long term

The role of the Ecole Normal Supérieur should be reorganised and reinforced. Teachers should be trained to teach Geography and History, emphasising pedagogic and practical skills.

6.3 Problems relating to Inspectors

a. Diagnosis

Many Inspectors responsible for Geography have no relevant qualification and were insufficient in number to monitor the large number of teachers under their supervision. Many have no training to act as advisers and rely on their own preconceived notions rather than on sound educational principles and innovations. Their function is simply to inspect teachers but they do not exercise a coordinating role between teachers and the research committee of the Institut Pédagogique National. The Inspectors have different views about the content of the curriculum, teaching methods and the role of geography in the Scientific branches. They are therefore a source of conflicting advice.

b. Recommendations

1. Norms should be established in the selection of Inspectors which relate to academic background, experience, pedagogic knowledge and to personal qualities of a spirit of cooperation and partnership with teachers.

2. A main function of Inspectors should be to encourage innovation in teaching methods and to influence teachers to change their ideas in teaching practices and use of materials.

3. The Inspectors should inter-act between each other,

should conduct research through field observation and should inter-act with the research committee of the Institut Pedagogique National.

6.4 Problems relating to the Geography Programme

a. Diagnosis

The present programme does not reflect the objectives of the National Charter and especially gives insufficient prominence to the study of Algeria. There is a lack of integration with History teaching and a lack of progression from what has already been studied at Fundamental School. The Programme gives only general aims and for some modules, no aims at all. This lack of precision and guidance is confusing for teachers. The programme is excessively long which means either that topics cannot be treated in sufficient depth or that teachers do not attempt to cover the entire programme. Both of these methods have bad effects on students examination performance. The programme does not include practical or field study, which would encourage student interest and understanding.

b. Recommendations

1. The programme should be based on sound educational

principles and innovations in teaching methods rather than simply indicate the subject matter to be covered.

2. The programme should encourage more specifically geographical skills rather than learning facts, which are not always geographical in nature. This could be achieved by greater concentration on Algeria at all three school year levels and reinforced by a greater practical element.

3. An effort should be made to build on what has already been learned at Fundamental School and to integrate more the teaching of History and Geography as cognate subjects.

4. The aims of the lesson modules should be made more specific and the length of the programme reduced to what can realistically be covered in the time available.

6.5 Problems relating to the Baccalauréat Examination

a. Diagnosis

Over the last decade there has been a catastrophic decline in the Baccalauréat pass rate. Pupils perform better in internal examinations, which are related to what has been taught in class, but the questions set in Baccalauréat do not always relate directly to the national programme and pupils are unable to answer them. Moreover, most Baccalaureat questions relate to map study and statistical

analysis whereas the pupils, and even the teachers, do not have these skills. Conversely, the examination also involves a number of very broad questions which cannot be marked on a consistent basis by the examination panel. Many pupils are confused by the vocabulary of questions and commonly misinterpret unfamiliar terms.

b. Recommendations

1. The terminology used in examinations should be clear and unambiguous as should the structure of the questions.

2. The questions should be more closely related to the programme so that pupils can relate questions directly to what has been studied in the classroom.

3. The questions should be more carefully related to the skills that pupils are able to acquire and teachers able to teach. It inevitably reduces pupil performance if the first exposure to a particular skill, like statistical analysis, should occur during the final examination.

4. Great care must be used in phrasing the questions in terms of choice of vocabulary and use of words appropriate to the pupil's level.

6.6 Problems relating to material resources

a. Diagnosis

Secondary schools in general lack even the most basic of reference materials (atlas, dictionary) in French or Arabic. Material on Algeria is lacking in spite of the prominence given to the study of the homeland. Equipment is generally not available and even many teachers would not know how to use it. Maps are generally not available except for very basic general and political maps. Audio-visual aids in Geography are virtually non-existent. The Institut Pédagogique National has not fulfilled its role as an innovator in teaching methods and the use of teaching materials and equipment.

b. Recommendations

1. Secondary School teachers have an annual budget for purchase of references. They should use this budget to build up a supply of books, revised every year.

2. Where possible, Geography should have its own room, equipped with basic references, maps, displays etc. Some of the geography units should be taught in the science laboratories, sharing the equipment.

3. The Institut Pédagogique National should play a much more active role in advising on teaching equipment needs and sources of documentation. Similarly, the Ministry of

Education in collaboration with the national mapping agency (IGN) should plan to provide schools with basic map needs.

4. Inspectors should organise seminars on the use of teaching materials and their role in the learning process.

6.7 Problems relating to the official textbook

a. Diagnosis

The textbook is not widely used by teachers and pupils as it contains insufficient information relating to the lesson modules. It is concerned more with description than geographical analysis. Pupils find the vocabulary used very confusing. The maps are not well selected in terms of scale and content. In some cases the colours in the key do not even correspond to the categories of information portrayed.

b. Recommendations

1. The textbook should be prepared by experienced geographers, with clear scientific and pedagogic aims. They should relate the chapters directly to the national programme and to their knowledge of pupil's ability levels.

2. The textbook should be made more attractive to read and stimulate pupil interest as an aid to understanding.

3. The choice of vocabulary of geographical terms should be specific and consistent so as to avoid confusion.

4. Maps should be more carefully designed to help pupil's comprehension. The text should include more statistical data which can be used for classroom exercises.

6.8 Problems relating to orientation

a. Diagnosis

Orientation is defective in that it is based only on school marks and the number of places and not on other factors such as the pupil's subject preference. Pupils with high marks are orientated towards Science and those with low marks towards the Literature branch. As a result failure rates are much higher in Literature. Orientation is a technical exercise rather than an educational one. Fixed percentages for the number of pupils entering the branches are established in advance and orientation does not take into account pupil's potential and subject interest. Many pupils are allocated to the Literature branches because of availability of places rather than their aptitudes or motivation.

b. Recommendations

1. Orientation should be based on educational rather than administrative principles. Teacher's views and pupil's interests should be taken into account.

2. The process of orientation should take place in two stages; initially at the end of Fundamental school, and then where necessary, a reorientation at the end of the First Year of Secondary School. In both stages the views of teachers and pupils interests should be taken into account.

3. There should be a unified examination at the end of Fundamental School so that a pupil's performance can be evaluated more accurately and teacher's recommendations be respected.

4. The Direction of Orientation in the Ministry of Education should be staffed by experienced educationalists rather than by administrators.

6.9 Problems relating to the educational system

a. Diagnosis

The educational system does not give sufficient importance to geography in Secondary Schools especially in the Scientific Branch. A result is a reliance on unqualified teachers, a low weighting coefficient and a lack of teaching

materials. The aims and objectives of the Geography curriculum are still undefined and no revision has been attempted. As Geography is seen as a complementary rather than essential subject it receives little attention in terms of improvement. The main priority in secondary education has been to create more schools to accommodate the rapid growth of pupil numbers rather than to give priority to curriculum development. Reform in education has concentrated on the Fundamental and higher levels, but the essential link, the secondary sector, is as yet unreformed.

b. Recommendations

1. Geography should be given more attention by the Ministry of Education in recognition of its importance in understanding the modern world and in particular so that pupils understand the development of their own country.

2. Geography should be introduced into the Science Branch core curriculum for Baccalauréat and its coefficient increased. Until Geography is regarded as a complementary subject there will be no improvement in teaching, curriculum development or in pupil performance.

3. The Ministry of Education should initiate a thorough reform of Secondary Education as a whole. In a nation which is evolving so rapidly socially, politically and

economically, it is unthinkable that the national system of Secondary Education should remain static and unresponsive to changing national needs.

This thesis has not been completed without much difficulty. Bureaucratic and administrative problems were encountered, strikes occurred in schools, the author had to learn English as a beginner and his family had to endure hardship during his long absence. It is hoped that the value of the thesis is that it is the first research of this type that has been carried out in Algeria and that the author's ability to contribute to the teaching of Geography in Algeria will have been improved as a result.

APPENDIX 1

Questionnaire administered to secondary school teachers

1) From your own experience, should the programme of geography reflect :

* Great Maghreb .dimension	Yes	☐	No	☐
* Arab world dimension	Yes	☐	No	☐
* Islamic world dimension	Yes	☐	No	☐

Your suggestions please

2) From your own experience should the programme of geography reflect:

* The African dimension	Yes	☐	No	☐
* Third world dimension	Yes	☐	No	☐
* Mediterranean dimension	Yes	☐	No	☐
* Socialist dimension	Yes	☐	No	☐

Your comments please

3) The actual programme of geography for the first and third year lacks the geography of Algeria is that :

* Acceptable to you ? Yes ☐ No ☐

4) Do you accept the fact that the geography of Algeria should be restricted to the third year only ?

Yes ☐ No ☐

Give the reasons please

5) Geography and history should be complementary subjects ?

Yes ☐ No ☐

Your comments please

6) Considering the benefits of materials in teaching geography, do you think the existing equipment are :

* Sufficient	Yes	☐	No	☐
* Insufficient	Yes	☐	No	☐
* Absent	Yes	☐	No	☐
* It is related to the programme	Yes	☐	No	☐
* Can be referred to easily	Yes	☐	No	☐

7) From yuor own experience, how do you see the programme of Geography

* It is quantitatve .	Yes	☐	No	☐
* It is qualitative.	Yes	☐	No	☐
* It is proportional to time	Yes	☐	No	☐
* Do you have to finish the programme at the expense of the time	Yes	☐	No	☐
* Or you have to realize the aims by excluding some of the programme units	Yes	☐	No	☐

8) Is the programme acceptable to you as regards :

* Its content	Yes	☐	No	☐
* Construction of units	Yes	☐	No	☐
* The existing materials	Yes	☐	NO	☐
* The aims of the programme	Yes	☐	No	☐

9) Do available school books :

* Support the content of the programme	Yes	☐	No	☐
* Support the aims of the programme	Yes	☐	No	☐
* Help students	Yes	☐	No	☐
* Are used in classroom	Yes	☐	No	☐
* Are acceptable in content	Yes	☐	No	☐
* Are acceptable in language used	Yes	☐	No	☐
* Are acceptable in map content.	Yes	☐	No	☐

10) Is there any connection between the Geography and History Programmes in :

* First year	Yes	☐	Some units	☐	No ☐
* Second year	Yes	☐	Some units	☐	No ☐
* Third year	Yes	☐	Some units	☐	No ☐

Your comment please

11) From your own experience is it necessary to have an integrated programme in Geography and History?

Yes ☐ No ☐

Your comment please

12) What do you think about continuous training by conference and semenars :

* Very useful	Yes	☐	No	☐
* Useful	Yes	☐	No	☐
* Normal	Yes	☐	No	☐
* of no value	Yes	☐	No	☐

13) The relation between teachers and inspectors is it :

* A cooperative effort	Yes	☐	No	☐
* Administration relation	Yes	☐	No	☐
* Educational relation	Yes	☐	No	☐
* Absent	Yes	☐	No	☐

14) What do you think about the role of inspectors, is it :

* Very helpful	* Helpful	* Not helpful
☐	☐	☐

15) Did you chose teaching geography because :

* Your qualification is in Geography	Yes	☐	No	☐
* You are interested in Geography	Yes	☐	No	☐
* You like Teaching Geography	Yes	☐	No	☐
* You have skill in teaching Geography	Yes	☐	No	☐
* You had no choice	Yes	☐	No	☐

16) How do you find Geography teaching :

* Very easy	Yes	☐	No	☐
* Easy	Yes	☐	No	☐
* Normal	Yes	☐	No	☐
*Difficult	Yes	☐	No	☐
* Very difficult	Yes	☐	No	☐

17) From your own experience should the actual programme of geography be :

* Developed	Yes	☐	No	☐
* Changed	Yes	☐	No	☐
* Have the aims clarified	Yes	☐	No	☐
* Have the goals clarified	Yes	☐	No	☐

18) Your General opinions

APPENDIX 2

Questionnaire to secondary school teachers

1) The goals of teaching geography which are stressed by Programme are clear to you

Yes ☐ No ☐

2) Do you have a clear idea about the content of the programme in order to achieve the aims of your task.

Yes ☐ No ☐

3) The achievement of the goals of any unit in the programme do you find it :

easy ☐ difficult ☐

4) If there are any difficulties to achieve the aims . do you think this is related to :

* Pupils ability ☐
* Materials ☐
* Time available ☐
* Programme content ☐

5) Do you follow the official instruction in the programme ?

Yes ☐ No ☐

Please give the reason

6) Do you follow the instruction given by the inspector ?

Yes ☐ No ☐

Please give the reason

7) Some educators consider the teachers as a guide for pupils, how much time did you spend talking during the lesson ?

Minutes

10	20	30	40	50

8) Did you prepare planning for any lesson ?

Yes ☐ some times ☐ No ☐

9) How did you divide the time for :

	Minutes
* Using materials	
* Analysis	
* Pupil's independent work	

10) The programme of Geography has three parts is it possible to finish every part in time ?

* First year	Yes	☐	No	☐
* Second year	Yes	☐	No	☐
* Third year	Yes	☐	No	☐

11) Is it possible to finish the programme with achieving the goals and satisfy the need of pupils ?

Yes ☐ Some times ☐ No ☐

Please give the reason

12) Is the textbook suitable :

* Content	Yes	☐	No	☐
* Language	Yes	☐	No	☐
* Maps	Yes	☐	No	☐
* Illustrations	Yes	☐	No	☐
* Physical format	Yes	☐	No	☐
* Geographical vocabulary	Yes	☐	No	☐
* Statistics	Yes	☐	No	☐
* Practical work	Yes	☐	No	☐

13) What is your opinion about students motivation?

High ☐ Medium ☐ Not at all ☐

Please give the reason :

14) Is there any attention given to practical study through :

* Field study :	Yes	☐	No	☐
* Laboratory	Yes	☐	No	☐
* Research	Yes	☐	No	☐
* Reports by group	Yes	☐	No	☐

15) Is the assessment of pupils by :

* Essay	Yes	☐	No	☐
* Oral question	Yes	☐	No	☐
* Written question	Yes	☐	No	☐
* Field work	Yes	☐	No	☐

16) Are the exam questions by :

* Direct questions	Yes	☐	No	☐
* Indirect questions	Yes	☐	No	☐
* Analysis of problems	Yes	☐	No	☐
* Reading map	Yes	☐	No	☐
* Comparative questions	Yes	☐	No	☐
* Memorizing	Yes	☐	No	☐

17) The questions are aimed to find the :

* Ability of analysis	Yes	☐	No	☐
* Skill of memorizing	Yes	☐	No	☐
* Skill of reading maps	Yes	☐	No	☐
* Skill of description	Yes	☐	No	☐

18) Is the exam by :

* Compulsory questions	Yes	☐	No	☐
* Multi choice questions	Yes	☐	No	☐
* General questions.	Yes	☐	No	☐
* Specific questions.	Yes	☐	No	☐

19) In your opinion do the pupils marks clarify the :

* Achievement of goals .	Yes	☐	No	☐
* Ability of students .	Yes	☐	No	☐
* success of methods	Yes	☐	No	☐
* Students motivation	Yes	☐	No	☐

20) Student's difficulties in exam is related to :

* Language	Yes	☐	No	☐
* Question construction	Yes	☐	No	☐
* Time available	Yes	☐	No	☐
* Statistics analysis	Yes	☐	No	☐
* Limitation of question	Yes	☐	No	☐
* Demand of question	Yes	☐	No	☐

21) Are the baccalauréat questions suitable in :

* Content	Yes	☐	No	☐
* Language	Yes	☐	No	☐
* Construction	Yes	☐	No	☐

22) Does the scale of marking in baccalauréat reflect :

* Pupil's effort	Yes	☐	No	☐
* Question content	Yes	☐	No	☐
* Programme aims	Yes	☐	No	☐
* Teacher's effort	Yes	☐	No	☐
* The time available	Yes	☐	No	☐

APPENDIX 3

Structured interview with Geography inspectors

1) As an expert in the teaching of Geography, what is your opinion about the ends and goals of teaching Geography at the secondary schools ?

2) According to your experience how do you see the state of geography within the general curriculum applied in the secondary schools ?

3) Is there any change or development in the programme

4) How fundamental is that change or development ?

5) What are the fundamental principles upon which the curriculum is based ? and why ?

6) According to your educational supervision, is there any coordination and continuity between Geography and the other discplines (e.g. History .).

7) Do you think the amount of time is enough to cover the programme ? If not please suggest what changes could be made .

8) In the absence of sufficient teaching means, what are your suggestions to improve teaching methods in geography ?

9) What are the most frequent complaints you receive from teachers, and students about the subject ?

10) Do you think that university training for teachers prepare them for the demands of Geography ?

If not what are the means to overcome that?

11) What are the difficulties that face teachers in carrying out their duties and what solutions do you see ?

12) In the absance of qualified teachers in geography, do you think that continuous training through conferences, seminars are sufficient ? or do you have alternative suggastions ?

13) what are the most important variables that you take into account when evaluating a teacher ?

14) Teachers of geography complain about the difficulties they face with final year scientific classes, since they are not examined in geography in the -Baccalauréat- How do you see the problem and what is the solution ?

15) Have you made an evaluation of the situation in Geography teaching and programme content ?

16) Pupils have complained about teaching methods in Geography lessons, what is your reaction to this complaint ?

17) Have you made any research concerning geography as a curriculum subject or the teaching methods used ?

19) Do you take part in setting the curriculum ? if yes what are the issues that you focused upon, and are you trained in programme development ?

Appendix 4

Questionnaire to third year secondary school pupils

1) Are you interested in geography lessons

Very interested	Yes	☐	No	☐
Interested	Yes	☐	No	☐
Not interested	No	☐	No	☐

Please give the reason

2) Do you think geography is :

Very useful	☐	Useful	☐	Not useful	☐

Please give the reason

3) Teachers of geography are using:

Maps	Always	☐	Some Time	☐	Never	☐
Statistics	Always	☐	Some time	☐	Never	☐
Atlas	Always	☐	Some time	☐	Never	☐
Various books	Always	☐	Some time	☐	Never	☐
Slides	Always	☐	Some time	☐	Never	☐
Films	Always	☐	Some time	☐	Never	☐

4) Have you met any difficulties in geography lessons?

Yes ☐ No ☐

If yes please Clarify

5)How often did you use text book.

In classroom	Every lesson	☐	Some time	☐	Never	☐
At home	Every lesson	☐	Some time	☐	Never	☐

6)Geography curriculum, Is it :

Very long	☐	Long	☐	Normal	☐

7) Which one of the methods below is used by your teacher ?

Working with maps	Yes	☐	No	☐
Working with statistics	Yes	☐	No	☐
Group Working	Yes	☐	No	☐
Discussion	Yes	☐	No	☐
Analysing data	Yes	☐	No	☐
Teacher talks	Yes	☐	No	☐
Field work	Yes	☐	No	☐

8) Could you pleas draw A map of Algeria .

X

And define Its Boundary.

9) Do you have any difficulties in geography :

Yes ☐ No ☐

If yes please specify

10) Do you enjoy geography lessons:

Yes ☐ Some Time ☐ Not at all ☐

Please give the reason

APPENDIX 5

CURRICULUM OF LITERATURE PROGRAMME

FIRST YEAR

Subject Content	Aims
1) Definition of Geography	To give students the basic knowledge of Geography essencial To understending regional studies.
2) The Earth	The position of the Earth relative to the other Planets, its dimensions And other characteristics relation to life on it .
3) Planetary movements of the Earth	
4) Latitude and Longitude	

Subject content	Aims
5) Exercises on Latitude and Longditude	
6) Cross sections and study of maps	
7) Seas and Oceans	Demonstrate the benefits of the Seas and Oceans and their influence on climate
8) The Atmosphere	Definition of climate and its inflence on life .
9) The facors Affecting climate.	
10) Exercices on the factors Affecting climate.	

Subject Content	Aims
11) Humidity and condensation	
12) Climate and vegitation regions	
13) Land mass and ocean distribution.	
14) The structure of the Earth.	Study of the structure of the Earth and the factors controlling the formation of its surface. Also study of the advantages and disadvantages of these surface processes.
15) Folds .	
16) Faults	
17) Volcanoes	

Subject content	Aims
18) Earthquakes	
19) Exercices on the internal structure of the Earth.	
20) Atmospheric and erosional processes.	
21) River and stream erosion.	
22) Marine and glacial erosion	
23) Exercices on the formation of the Earth surface.	
24) Soils types and profiles	

Subject content	Aims
25) Geography of Population, distribution and density.	
26) Increase of World Populations and migration.	
27) Age structure of the World Population.	
28) Exercices on the structure of the world's Population.	
29) Hunting and fishing economies.	To explain the use of the natura resources.
30) Agriculture	
31) Exercises on hunting	

Subject content	Aims
32) Industry and its problems.	
33) Transport and trade.	
34) Exercices on industry, transport and trade.	
35) Studies of major cities	

Second year curriculum

Subject content	Aims
Geography of the contries of the Greater Maghreb Introduction to regional studies	
1) Study of Maps.	To give students the basics studies
2) Importance of the location of the Greater Maghreb.	To permit students to knwo the economic potantial of the Greater Maghreb, its homogenity and its position in the World.
3) The physical Geography of the Greater Maghreb.	
4) Economic development and its related problems in the Greater Maghreb.	
5) Exercices on the Greater Maghreb.	

Subject content	Aims
GEOGRAPHY OF ALGERIA 6) Human and natural Characteristics of Algeria	Knowledge of the Algerian potentials, methods of natural development and its future planning.
7) Exercices on the general characteristics of Algeria.	
8) Economic Policy of Algeria	
9) Agricultural organization.	
10) Agricultyral production	To show the importence of agricultural production in the natural economy .
11) Basic characteristics of industry.	To show the Algerian industrial potential
12) Exercices on the regional Studies already investigated	

Subject content	Aims
13) Major industrial sectors.	To show the importence of industry in Achieving national economic independence.
14) Problems related to industry.	To show the problems related industrializations.
15) Transport and trade.	To show the importance of transport in overcoming problems of isolation.
16) The major industrial zones.	To know the natural, human and economic potential of each zone and to realize regional equilibrium.
17) North-east Algeria	
18) North-east Algeria	
19) North-east Algeria	

Subject content	Aims
20) North-central Algeria.	
21) North-central Algeria.	
22) North-central Algeria	
23) North-west Algeria	
24) North-west Algeria	
25) North-west Algeria	
26) Eastern sahara.	
27) Western sahara	
28) Exercices on the economics of Algeria.	

Subjectr content	Aims
29) Morocco, natural and human characteristics.	To know the potential of the contry and the developments already proposed. Also for comparsion with other Maghreb countries.
30) The economy of Morocco	
31) Tunisia, natural and human characteristics.	
32) The economy of Tunisia.	
33) Libya, natural and human characteristics.	
34) The economy of Libya.	
35) Mauritania ,general background	
36) The Arabic Republic of Western Sahara, general background.	

Curriculum of the third year.

Subject content	Aims
1) Capitalist system.	To show the characteristics of capitalism and related problem
2) Socialism	To show socialism as a way of development.
3) Third world	Underdevelopment in the third world and its relationship to colonisation.
4) United States of America.	To show the nature of American life.
5) American agriculture	To show American agriculture and its role in the politics.
6) American industry.	To show the potential of American industry.

Subject content	Aims
7) Transport and trade in U S A	To show the relation between economics and politics.
8) E.E.C. natural and human characteristics	To show natural and demographic characteristic of the E.E.C.
9) Agriculture in the E.E.C.	To show variations within the E.E.C.
10) Industry in the E.E.C.	To show the complementary nature of industrialisation in the various countries.
11) External trade of the E.E.C.	To study the relation between the E.E.C. and world trade.
12) Japan, natural and human characteristics.	Adaptation of the Japanese to the environment.

Subject content	Aims
13) Industry, transport and trade in Japan.	Overcoming natural disadvantage. in Japan.
Socialism Countries. 14) The Soviet Union, natural and human characteristics	The importance of varied environments.
15) Agriculture in the Soviet Union	The extent to which agriculture in the Soviet Union has been succesfull.
16) Industry in the Soviet Union	To show the world importance of the Soviet Union's industry.
17) Transport and trade.	To show the role of transport.
18) The structure of C.O.M.E.C.O.N.	To show the integration of the Socialist economies

Subject content	Aims
19) Yugoslavia	Characteristics of the Yugoslavian Development.
20) People's Republic of China, natural and human characteristics.	The ability of the chines to overcome natural problems.
21) Agriculture in China.	The Chinese experience in agriculture.
22) Industry and trade.	The extent to which China has succeded in industry.
23) The Arab Countries, natural and human characteristics.	The importance of the natural and cultural unity of the Arabic countries.
24) Agriculture in the Arab world.	Importance of agricultural integration.

Subject content	Aims
25) Nigeria.	Importance of agricultural integration.
26) India	Social and ethnic conflicts.
27) Agriculture in India	The effects of the social conflicts on agriculture and food supplies.
28) Indonesia	To know the economic potentials of the country
29) Brasil	The effects of international companies on the economy of Brasil.
30) North-South relation	Creation of fair bi-lateral relation
31) Wheat.	Food security.
32) Oil	The role of the O.P.E.C.in the world economy.