

**“A-level Performance and the Development
of Greek Culture in the
Greek Supplementary Schools
of London: a Cost-Effectiveness Analysis.”**

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To my family

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ABSTRACT

This thesis examines the cost-effectiveness of the Greek Supplementary Schools with respect to the two aims they pursue:

1. The good performance of their students in the A-level Modern Greek examination and
2. The maintenance of a 'Greek cultural identity' by their students.

In the study I used a random sample of nine schools with 203 students from successive year cohorts. The data was collected through questionnaires, interviews, and group conversations.

The ML3 package and the value added method were employed to analyse the factors affecting the A-level results. Discourse analysis with some elements of conversation analysis was used to examine the cultural aim of the schools.

The study found that there are differences in the cost-effectiveness of the different Greek Supplementary schools. These differences are mainly due to the student intake (GCSE grade) and to the school type, that is whether it is a church school, a parent's association school or an independent school. The cost of the school appears to have a negative effect on performance, but the effect disappears when the type of school dummy is included.

The study also showed that girls do slightly better in the exams than boys and that educated mothers positively influence the performance of students. Also, certain characteristics of the teachers and head teachers as well as factors related to the school organisation and ethos were found to have an effect on the A-level grades.

The cultural analysis showed that the school did not appear to be responsible for creating the Greek Identity of students, but developed and reinforced what the family had already given. When the two main types of analysis were brought together, it was found that these two aims are jointly pursued in these schools.

The findings of this research will be of use to decision makers in the field of educational provision in the Greek Supplementary Schools. The results show that cost-effectiveness analysis is a useful tool that should be used in school effectiveness studies. The study also shows that in analysing the cost-effectiveness of schools the multi level approach has significant advantages over simple input-output methods.

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PART A

Theoretical and Background Information

CHAPTER ONE: Introductory and background information

1.1.Introduction

The stimulus for this research has grown out of thoughts, knowledge and experiences I accumulated during the five years I spent as a teacher and a head teacher in Greek Supplementary Schools of London. During those years I studied for an M.A. in the Economics of Education, at the Institute of Education, University of London. As an economist of education with special interest in the educational praxis and its effectiveness and improvement, I attended the conferences, the lectures and the work which was taking place at the Institute of Education and the whole of England (and probably many countries abroad) on school effectiveness and school improvement. All these factors contributed to the choice of this research topic.

This thesis deals with the educational provision that is taking place in the Greek Supplementary schools (G.S.S.) of London at upper-secondary level. That is, it examines the courses in A-level Modern Greek that the G.S.S. offer. The G.S.S. are schools that operate outside the normal school hours within the Greek Community in London. They 'teach' the Greek language, the Greek History and the Christian Orthodox religion to the children of Greek origin that live in London. The tool that this study uses in this examination is cost-effectiveness analysis in its broader form. It tests for the effectiveness of the G.S.S. in succeeding in achieving their aims. It further examines whether they are cost-effective in carrying out their work or not.

The subject of the thesis has been approached with caution because, on the one hand the topic of school cost-effectiveness is broad and

important, and on the other hand because there is only a small amount of research in the area of Greek Supplementary Schools and almost none on the attainment of the students in the exams. This study made an effort to expand the usual cost-effectiveness model which mainly deals with the academic performance of the students. A careful observation of what took place in the G.S.S. and the reading of official documents and declarations by the interested groups and governments, proved the exercise of examining only the students' passing grades to test for effectiveness partly correct and probably misleading. It will be shown in the relevant chapters that the G.S.S. pursue two goals at the same time: one is the good performance of the students in the exams and the other is 'to help the students of Greek origin to maintain their Greek identity.

Consequently, this research was designed to find out if there are any differences in the cost-effectiveness of the different G.S.S. in pursuing the above mentioned two goals. Having spotted these differences it will examine the factors that may contribute to them. Such factors might be the personal characteristics of the students, the SES variables, the teacher and head teacher characteristics, the characteristics of the school management and organisation and of the school ethos. This is an important piece of work as its major aim is to draw any conclusions on the effectiveness of the G.S.S. with regard to the aims they pursue and with regard to the value of the money which is spent in the A-level Modern Greek provision. Such conclusions might be of interest to the policy makers in the sector of the G.S.S. and in the educational sector in general.

The structure of the thesis

This thesis consists of eight chapters which were designed to deal

with all the issues that should be involved in such a study. The first chapter defines the institutional identity of the Greek Supplementary Schools by offering some historical information on their establishment and operation. The information given in this chapter highlights the problem of the effectiveness in an educational sector of such a particular type. It also throws light on the choice of the specific method and tools of analysis.

The second and third chapters examine the theoretical framework of the study. This study is concerned with the educational productivity and deals with educational effectiveness. Chapter two on theory defines the concept of effectiveness and compares it with the concept of efficiency. It also deals with the related field where these concepts are mainly applied: that of educational production functions. This chapter also refers to the closely related issue of the application of the concept of performance indicators to education as well. The important issue of costing an educational program is examined in chapter three together with the way that this is related to effectiveness in cost-effectiveness studies. This chapter also describes the theoretical framework of the cultural piece of work.

The next chapter reviews the literature in the field of school effectiveness and cost-effectiveness. The application of purely cost-effectiveness analysis in education is limited and this study was not informed only by the studies in this specific field. It was inspired and it used methods and tools that were used in input-output and school effectiveness research too. This is the reason that the chapter on the review of the literature is so detailed and comprehensive.

Chapter five presents the methodology that was used in the empirical piece of work with which this study is involved. It describes the

sampling procedures, the tools that were designed and their application. It also comments on the types of analyses that were used and the statistical packages that were applied in examining the effectiveness on academic and cultural grounds. Additionally it offers some insights on the factors that influenced the choices of tools and methodologies.

Chapter six describes the empirical work for the collection of data and proceeds to the description and analysis of the data on the students' performance. It uses graphs and descriptive statistics to present the nature and the distribution of the data and the findings and then proceeds to the inferential statistics. It tests for correlations, relationships and co-variance amongst the variables which had been included in the model as this was described in the chapter of methodology. It builds a regression model for individual and school level data to eliminate the factors that influence the academic performance of the students.

Chapter seven presents the procedure and the data which were collected to examine the cultural role of the G.S.S.. The chapter then describes the analysis of the data which were found in the conversations of the three groups of students in the framework of discourse analysis. It makes an effort to combine and compare the results of this qualitative piece of work to the ones on the quantitative data.

The last chapter evaluates the work and the results of this study. It aims to bring the results of the two types of work together in an effort to evaluate the findings within the theoretical and empirical framework which was described in the relevant chapters. In the process of doing this it draws any conclusions which will inform the decision

makers in this field and be of use to educationalists in general.

This first chapter will present the historical and mostly descriptive background information concerning the establishment, the nature and the operation of the Greek Supplementary Schools (G.S.S.) that exist in London. In doing this it will first offer some historical information on the Greek (mainly Greek Cypriot) immigration into Britain. It will then present the state of the English Educational system during the times of immigration, as this related to the educational 'fate' of the immigrant children. Finally it will refer to the establishment of the G.S.S. and mention their development up until the present time. It will end by giving a brief description of the present state and organization of the Greek Supplementary Schools.

1.2. Greek and Greek Cypriot immigration into Britain

1.2.1. The period until 1955

It is estimated that 90 percent of the whole Greek community in the United Kingdom consists of Greek Cypriots (Papafoti, 1984, p. 23). The immigration of Greeks and Greek Cypriots to England can be divided into two distinct periods: before 1955 and after 1955. The first Greeks who emigrated to Britain came from mainland Greece, Constantinople and Smyrna. They mainly settled in the seaports of Britain and worked in fishing and shipping. Many of them became ship owners. The majority of the Greek ship owners in London were established in the area of Bayswater, where they built the Christian Orthodox Cathedral of St. Sofia.

This immigration from Greece and the Greek islands has decreased over the last fifty years. Greek Cypriots who emigrated a bit later into

Britain were also established in these seaports and thus, there is a sizable Greek population in more than forty towns apart from London. These first immigrants from the Greek mainland established such institutions as churches and Greek Supplementary schools which later immigrants from Cyprus used to maintain a cultural identity (Metis, 1993).

Immigration from Cyprus to Britain was very small at the beginning of the twentieth century, it increased in the 1930's and stopped altogether during the years of the Second World War. Greek Cypriots fought on the side of the Allies in the Second World War and this fact brought many servicemen to Britain. The first Greek Cypriots in England belonged to the lowest socio-economic class in England, a social status they also held in Cyprus. This could be the reason that many of them were not interested in maintaining their cultural identity and, thus, did not contribute much to the establishment of cultural institutions. During the war, however and especially in the years after the war, many Greek Cypriots bought restaurants from their Italian owners and in this way became economically independent. Both the economic independence and the immigration of the whole family to Britain can be seen as factors in the determination of the Greek Cypriots to maintain their cultural identity (ibid, p. 30).

1.2.2. The period after 1955

The main migration of Greek Cypriots to England occurred after 1955 and it increased until 1964. The E.O.K.A. struggle against the British, the cooperation of the Turkish Cypriots with the British, the idea of partitioning the island into Greek and Turkish sectors and the inter-

communal troubles emerged emigration. In 1974, when Turkey invaded Cyprus, over 12.000 Greek Cypriots arrived in England as refugees to join relatives or friends who had come earlier and enjoyed good status. Today there are more than 150.000 Greek Cypriots living in Britain.

1.3. Educational policy in England and Wales and its effects on the Greek community

The education policy in Britain towards the immigrant children mostly came as a response to the so-called 'problem' of the immigrant children and mainly refers to educational practices of multiracial education. The aims and the context of multiracial education can be understood as the action which stems from a social imperative. D. Mullard (1982, p. 120) sees three phases in the development of multicultural education in Britain which are interconnected and interdependent. He specifically points out:

‘ They can be broadly designated the assimilationist phase, and its incipient world views and model of social action which characterised thinking on race and education from the early 1950's to the 1965 White Paper; the integrationist phase and model from 1965 to the early 1970's; and finally the present cultural pluralist phase and model which, as will be shown, is essentially a revised version of the integrationist model'

Below we refer to these phases in more detail.

1.3.1. Educational policy between 1904-1965

In the first report from the Select Committee on Race Relations and Immigration it is made clear that there had been a lack of adaptation of the British education system to other cultures. In the code of 1904, the, otherwise , important aims do not refer at all to cultures other than

English and Welsh. Later official statements about education, although they present some different hypotheses, theories and ideas, tend to reassert the values of the 1904 Code. The beginning of the recognition of the educational rights of the cultural minorities first appears in the 1944 Education Act and relates to religious education.

Although the 1944 Act acknowledged the existence of different religions in England and recognised the rights to cultural autonomy in minority groups, it was restricted to the subject of religious education only. Language and other aspects of culture were ignored. Papafoti (1984, p. 73) claims that these educational documents support the view that the English education system made no concessions to the specific educational needs of children from different ethnic backgrounds. There were few official statements on the aims of primary education between the 1944 Education Act and the 1967 Plowden Report.

The Plowden Report was a very important educational document regarding the aims of the primary school. The report, however, did not respond to the specific educational needs of the immigrant children. Its concern for immigrant children focuses mainly on the issues of unfamiliarity with the English way of living, the problems that the immigrants have in learning English and the educational disadvantage of some immigrant groups.

1.3.2. Educational policy since 1967

British society was increasingly becoming a multicultural society during the post 1967 period as the numbers of immigrants rise. According to the DES statistics (Great Britain, Parliament House of Commons, Select Committee on Race Relations and Immigration, Session 1972-73, Education, Volume I, Report, London, H.M.S.O., 1973, p.

3), there were about 280.000 immigrant children in Britain in January 1972. 40 per cent were from the West Indies, 20 per cent from India, 10 per cent from Pakistan, 10 per cent from Africa, 10 per cent from elsewhere in the Commonwealth and 10 per cent from non-Commonwealth countries.

These children are often seen as a 'problem'. There is little appreciation of human values and attitudes or of the rich cultural variations which people from other countries have brought to Britain and its schools. The research in the field of educating immigrant children relates to the research on multi-cultural education. The special problems which are identified in the relevant literature for ethnic minority groups can be classified in three major groups (Papafoti, 1984, p. 93):

Problems of identity

Problems of communication

Problems of access to community resources

Closely related to this study is the educational policy towards the teaching of the English language as opposed to the immigrant children's mother tongue

1.3.3. Teaching language to immigrant children

In the 1960's there was a movement towards the teaching of English to immigrant children, but a very limited movement towards the teaching of their mother tongue. In 'The English for Immigrants' document, in 1963 it was suggested that parents might speak their own language with their children in their homes, despite the school's wish that the child should practice his or her English.

In the Circular 7/65 teaching of English was emphasised even more. The circular pointed out that the first educational measure to be taken for Immigrant children was the teaching of English. In schools where there were a number of children with little or no knowledge of English there should be arrangements, even reception classes, to enable the children to learn English as quickly as possible. In this way, a policy of assimilation was taking place.

The next important policy document in the field of teaching language to immigrant children is the Bullock Report, which emphasises the importance of bilingualism , both in education and society. This Report makes it clear that no child should be expected to abandon his or her mother tongue and culture in school. More specifically, the Report emphasises that the more confident the children are in their mother tongue, the easier they will acquire the English language. In this sense, this report has made a big step towards multiculturalism.

Research in the language and learning patterns of children in school who do not speak English as a first language, provided evidence that these children are seriously disadvantaged educationally and that they will be slower to improve if their mother tongue is not accepted and catered for in school.

The D.E.S. document on School Curriculum in 1981 (p. 3) states two aims which are relevant to multicultural education. This document considers that those students who have a first language which is not English or Welsh are a valuable resource. It, therefore asks how should mother-tongue teaching for such pupils be accommodated within modern language provision so that this resource does not wither away and the pupils may retain conducts with their own cultural

communities. However, this statement (DES, 1981) considers the secondary education level mostly.

In the Rampton Report, mentioned earlier, a broader definition of 'multicultural' education is given and it recommended that the curriculum in all schools should reflect the fact that Britain is a multi-racial and culturally diverse society. The Report's belief that a West Indian child's language is important for his motivation and achievement, is very relevant to the beliefs and wishes of the Greek community regarding Greek language (Papafoti, 1984, p. 114). However, as the same author comments on p. 115, the priorities emphasised in multicultural education policy nationwide were not those identified by the Greek community. The question of mother-tongue and culture was largely ignored or seen as a way of improving self-image rather than recognised in its own right. The Greek community's demands for the teaching of the Greek language and the Greek Orthodox religion were not met. However, it is possible in the British education system for individual local authorities to formulate and adopt policies to meet particular local conditions. This happened in the London Borough of Camden and Haringey who pay a considerable amount of funds to support the teaching of the language of ethnic minority groups.

Nowadays, the financial support which was given to ethnic minority groups and aimed to support their language, under Section 11, is being undermined. The definition used to identify minority groups who need such help would not include the Greek immigrants of the second generation. A light might be seen on the horizon in terms of having the Greek Language taught in English secondary schools as a European language. The movement towards this is still very reluctant and as the decision making is at school level, only when there is a sufficient demand, will such courses be run. The Greek and Cyprus governments

have offered to provide teachers for schools who wish to commence the teaching of the Greek language.

The educational policies in Britain which influenced the establishment and running of the Greek Supplementary Schools can be more easily understood when placed in the framework of pre-modern, modern and late-modern education issues as these are described by Cowen (1996). The author claims (p. 158) that in the educational systems with pre-modern and modern educational patterns 'The moral messages have to do with the formation of a common political identity. Minorities are thus a problem- and at worse a nuisance particularly when they insist on retaining access to their own language or their own cultural history or their own religion through the state-provided educational system.' He also states (p. 159) that in the educational systems with late-modern patterns 'The state does not recognise minority identity: all are equals as consumers and demanders of education and in the market-place all have, in principle, the freedom of choice. In this pattern minorities cease to be a nuisance...'

1.4. The Greek Supplementary Schools

The G.S.S. came into existence as the solution the Greek community provided to the problem (Papafoti, 1984, p. 159) of maintaining its own culture and transmitting it to its children. The Greek community believed that it should found a solution 'alone' since there was a lack of provision in the British state education system for the recognition of minority cultures. In this section I shall first give a historical description of the establishment of the G.S.S. and then refer to their aims, administration, finance and structure.

1.4.1. Some Historical Issues

The first G.S.S. in England was established in Manchester in 1869. It was established and run by two teachers who were sent to Manchester from Athens. This school had 20 students, but it closed down in 1877. Since then this teaching was undertaken by the priests of the Greek Orthodox Church. The first G.S.S. in London was started in St. Sofia's Cathedral in Bayswater.

Although these can be considered as occasional Greek classes, they were the forerunners of the G.S.S. in the form that they are today. Two more schools were established between 1950-54, six in the years 1955-59, four between 1960-63 and another four in 1964. This development continued and in the school year 1966-67, the total number of G.S.S. was 35 and the total number of pupils between 5-16 years of age was two and a half thousand.

In the school year 1980-81 there were 67 schools in London and 40 in other towns. The number of pupils in London was 6.939 and in other towns 1.319. The numbers of both, schools and pupils had doubled in these years. It could be that the reason for this was not only the rising numbers of immigrants, but also the beginning of a 'multicultural education' policy in Britain .

The teaching of A-level courses in the G.S.S. first began in the 1970s when those involved in the schools realised that they should offer further incentives to the children of that age to stay in the G.S.S. and therefore close to the Greek community and the Greek culture. The exams the students undertook were those of the University of London Assessment Council. In 1992, however, the council announced its determination to reconsider its policy of having Modern Greek in the list of subjects it examined. The reasons given for this decision were mostly of a financial nature: the numbers of candidates in this subject

is small making it very costly in relation to exam fees.

All the different groups within the Greek community in Britain reacted to this decision in a variety of ways. Petition forms were signed and submitted to the University of London Assessment Council. Official and unofficial letters were sent to the council. The educational counsellors of the Greek Embassy and the Cyprus High Commission in London begun negotiations with the University of London officials. The Greek side offered to undertake some of the financial burden of the carrying out of the exams: examination centres were established amongst the G.S.S., examiners were assigned from the personnel of the G.S.S. as well as secretaries, invigilators, etc.

A committee was established from the different educational groups of the Greek community which began negotiations for further collaboration with the University of London Examination Board. The question of whether the Greek Language will continue to be a subject in the list of the University of London Examination Board, has still to be resolved by 1998.

1.4.2. Aims of the Greek Supplementary schools

This thesis took into consideration the aims of the G.S.S as these derive firstly from the official documents of the government of Greece and Cyprus, the speeches of government officials and officials from the Greek community, and the memos of meetings of the committees of the Coordinating Body of the G.S.S (the EFEPE) (more on this Body will be written below). I also interviewed the Archbishop of Thyateira and Great Britain Gregorios in January 1993. He is the president of KES -all the church schools- and the president of EFEPE too.

Below I shall present the aims as they appear in the most recent official document of the Greek Government and represent a summary of what was proclaimed in the past:

'Greek Education abroad especially aims:

- a) to demonstrate, maintain and cultivate the national and cultural identity of the Greeks who live abroad through the teaching of the language, the studying of elements of the Greek civilisation, and the organisation of cultural activities,
- b) to contribute to the development and the presentation of the Greek letters, the Greek and Orthodox Tradition and the Greek civilisation to the Greeks who live abroad and the other peoples with whom the Greeks in the host countries live,
- c) to help Greek children develop their personality in the cultural and social conditions of the host country and to help Greeks abroad in general follow developments both in the host country and in Greece. In this way they will be in a position to have a successful career in whichever country they may choose,
- d) to contribute in the creation of closer bonds of the Greeks abroad amongst themselves and with Greece,
- e) to contribute to the mutual understanding and the peaceful living and cooperation between individuals and groups of different ethnic origin and cultural tradition, in the framework of the multicultural societies that exist today'

(White paper, 1996, Greek Ministry of Education, p. 1)

There is evidence of agreement on these aims by all groups that are involved in the G.S.S.. However, there might be a difference regarding the degree to which these groups adopt and implement these aims. For example, the aim of offering the Greek Orthodox religion and education more generally is given more emphasis in the Church schools (KES). These differences will appear in the empirical work undertaken for this research and they will be examined with reference to the criteria of effectiveness that this study had set. The interviews with different persons involved in the provision of A-level Modern Greek classes in the G.S.S. , as well as the personal experience of the writer, revealed that the provision of Modern Greek A-level classes can be summarised into two aims:

a) to help the students develop and maintain their ethnic and cultural

identity

b) to help the students have a good performance in the A-level examinations.

A reference from a writer who dealt with the G.S.S. in the 1980s can be used to support the above statements:

'Thus the very sophisticated aim of the Greek Supplementary Schools is to help the Greek immigrants to keep the most valuable elements of their cultural identity and at the same time to integrate into the wider environment and become lawful and useful citizens... For these schools, the dilemma is, how children with Greek origin can keep their cultural characteristics and at the same time progress in the mainstream system and have the same opportunities and the same achievements as the children of the dominant group of British society, so that they will be able to take their place in this society the same as other children'

(Papafoti, 1984, pp. 165-66)

1.4.3. Organisation -Administration of the G.S.S.

Analysis of the organisation and the administration of the G.S.S.

Mainly, the administration of these schools depends on who controls them or, as it is commonly stated, who is their 'provider. The term 'provider is used in this thesis to express the 'type' of school which, as it will be elaborated upon below, is related to the 'sponsors' and/or the 'owners' of the schools. In these terms we could name three categories or types of Greek Supplementary Schools:

i) The first consists of schools that are within the control of K.E.S. (Central Educational Committee). These schools are usually run by priests in their church and the Archbishop of Thyateira and Great Britain is the president of K.E.S.. Thus these schools are known as church schools.

ii) The second group of schools consists of schools which are organised within the educational organisation of O.E.S.E.K.A.. These schools are run by a committee which consists of parents and individuals from the central committee of O.E.S.E.K.A..

iii) The third category of schools includes those G.S.S. which do not belong to either of the two previous categories. The number of these schools is not high, but the numbers of their students is growing.

Below I make some general comments on the organisation system that is used in each category of schools:

i) The Archbishop is considered to have a great influence on all educational decisions and policies which are formulated by KES. At the same level of influence there has always been the Greek educational advisor who is based at the Greek Embassy in London. KES schools are managed by the bishops and the teachers or priests who act as head teachers of the KES schools.

There are groups outside this 'formal organisation' who have influence on the formulation and application of educational policies in this sector of church schools:

The Greek Government appoints more than 80 teachers, today, to teach in the G.S.S.. most of these teachers used to work in the KES schools (before the establishment of EFEPE). Textbooks and other teaching materials have always been supplied to the KES schools. Recently, such material is distributed to all G.S.S.

The parents is another group of influence in KES schools of all levels within the hierarchy. There usually exist Parent-teacher associations in KES schools, where these two groups are supposed

to work together for the betterment of the educational provision.

There are three organisations that may influence the decision making in the sector of KES schools. First, the Union of Greek Teachers Working in Great Britain which consists of teachers who come from the Greek mainland. Secondly, the KEA which is the group of the teachers who come from Cyprus (it is usually called Cyprus Teacher Delegation). Thirdly, it is the O.E.D.A. (Organisation of Greek Teachers England) whose members are mainly part-time teachers. Some of them are qualified teachers but the majority are not. The majority of these teachers have other 'main' occupations such as accountants, researchers, and other. These groups of teachers act both as syndicates or unions and educational or cultural groups. Consequently, their influence is applied in different ways and through different channels. In the 1990s, within the efforts for the unification of the G.S.S., the numbers of teachers from the Cypriot educational delegation (KEA) who work in the schools of KES is increasing.

ii) OESEKA was supposed to have the main responsibility for the formulation of educational policy for the parents associations it represents. The administration and the running of these schools, however, is mainly carried out by members of KEA in collaboration with the parents' committee. The head teachers of these schools are mainly members of KEA. Nowadays, the teachers in OESEKA schools may come from all three groups of teachers (the Greek and Cypriot delegations and part-timers).

ii) The Independent schools are mainly run by groups of parents and 'trustees' who form a committee. The head-teachers in these schools may influence the educational policy decisions in their school through their collaboration with this committee. The head teachers have the

obligation to apply and follow up the decisions undertaken in the meetings.

The parents of the pupils in all three types of schools offer financial and volunteer help with the running of these schools and in all cultural and social events that the committees of the schools undertake.

Efforts to Establish a Common Coordinating Body

The need for a common body to be responsible and 'cover' the needs of all the Greek Supplementary Schools was expressed in 1964, on the day that KES was established, by the then Metropolitan of Thyateira. Various events that took place in the 1960s influenced the development of the educational provision in these schools. The first attempt at unification took place in 1967, when the Greek Parents' Association asked for help from the Cyprus Government. It was then that the problem of the Greek community in Britain proved to be more complex than had been realised (Metis, 1993, Papafoti, 1984). Below I present a reference from the above mentioned thesis which states the problem which exists to this day:

' It (the problem of the Greek community in Britain) has become an issue of controversy, as topical today as it always was, not only an educational one but but an ideological one too. On the one hand is the Church with a right ideology, and on the other hand are the schools of O.E.S.E.K.A. and the other independent schools, the majority of which are thought to be of left wing orientation. Thus the failure of the efforts at a unification of the Greek schools in Britain should be seen in this context.'

(ibid, p. 172)

Another effort was made in 1971, but again it failed. The Church reacted strongly then because it believed that its role was being undermined. Another attempt in 1976 again led to failure. In 1981-81 the then Ministers of Education of Greece and Cyprus visited London and

discussed this issue with representatives of the Greek community but they did not find any solution to the problem. It was not until November 1990 that an official agreement was announced by the Ministers of Education of Greece and Cyprus expressing their willingness to cooperate with all the interested groups towards a solution of the problem (more in KES ,1992)

Negotiations began and meetings were held to discuss the 'rules' that would govern this coordinating body. At this time there was a disagreement mostly regarding the number of representatives that each 'provider' should have in this coordinating body. Finally, the coordinating body was established and named EFEPE (Common Body for the Education of the Greek Community). The first official meeting of EFEPE took place on the 29th of September 1992. One Independent school did not join the EFEPE then and another one was established outside the EFEPE in 1994.

1.4.4. Finance of the G.S.S.

Income

The resources that are used by the G.S.S. come from different bodies. Papafoti (1984, pp.177-80) groups these resources as follows: resources from abroad, tuition fees and other resources. The resources from abroad come from both Greece and Cyprus, in the form of teachers, textbooks and money. The tuition fees generally provide a substantial economic base for these schools. Students in schools run by the same body (KES, OESEKA or Independent) pay equivalent levels of fees. In the case of church schools the tuition fees today range from 130-150 pounds yearly for the A-level courses. In the OESEKA schools from 140-160 pounds and in the Independent schools from 150-170 pounds.

Besides the tuition fees the G.S.S. raise money by other means such as dinner-dances, concerts, raffle tickets, donations etc. Some G.S.S. which are in the area of Haringey also receive financial support from the Local Authority.

Expenses

Parent's Committee or the Committee of the school is responsible for supplying the financial resources for the educational provision in the G.S.S.. They must cover the payment of the part-time teachers, the payment of the rent or the mortgage and the payment of the educational equipment. This issue is elaborated in the chapter of methodology which discusses the types of costs of schools to be included in the analysis.

1.4.5. The structure and the operation of the G.S.S.

Most Greek Supplementary schools in the area of London are quite well organised and have a sufficient number of pupils to be able to organise the classes into age groups. Their location in the area of London is within the reach of most of the Greek population and provide a continuous education throughout the year for between 3 and 5 hours a week. There are about 70 such schools in the London area today. Most of them are located in North London where the majority of the Greek Cypriot community is concentrated. G.S.S, however, are scattered anywhere that Greeks are living.

According to statistic of the Cyprus Teacher Delegation (KEA), in 1993, the number of Greek pupils in the G.S.S. in Britain is 10.230. The proportion of Greek children that live in Britain is estimated as the

15%-20% of the whole Greek population which is 150.000. There should, therefore, be 22,000-30.000 children aged between 6-15 in Britain, of these around 30% are enrolled in the G.S.S. As far as the A-level Modern Greek provision is concerned, only 22 of the schools in London offer A-level Modern Greek courses and have around 390 students (the numbers were given to the author by the education office of the Cyprus High Commission).

An analysis of the hours that the G.S.S. operate indicates that in the North London area, where the schools tend to be larger, they have more teachers and are open for more days a week than those in other areas. The church schools tend to be larger and are open for more hours than other types of schools. Schools who operate for more hours can clearly provide a fuller and more varied curriculum and more cultural activities.

The cultural activities are usually offered in the Youth Clubs which are run in most big schools. Very often and especially in the classes of primary schooling they are incorporated in the normal hours of teaching. They include Greek music and dance, scouts, Sunday School, football, art, drama, celebrations of ethnic and cultural events.

All the OESEKA and Independent schools in London are accommodated on the premises of state schools. All education authorities, nowadays require rent for permitting the Greek schools to use their school buildings. The level of rent varies according to the needs that the Governing Body of the specific school want to compensate for. Of the 22 church schools the operate in London, 16 are accommodated in premises belonging to the Greek Orthodox Churches or the Greek Communities, the other 6 schools use rented premises.

As has been shown in this chapter, the supplementary schools have been quite well developed and have become able to provide the type of education they wish to children of Greek origin, despite the problems and the divisions which were described earlier. As Papafoti claimed some years ago (1984, p. 197):

'The organisational structure of schools provides a framework in which the aspirations of the Greek community can be fulfilled. These aspirations are to transmit a Greek culture to Greek children in Britain. This culture is transmitted through the content of education- the curriculum of the supplementary schools-'

CHAPTER TWO: The theoretical framework of the study.

The Concepts of Efficiency, Effectiveness and Educational Production Functions.

2.1. Introduction

Cost-effectiveness analysis has been used for evaluation in public sector projects for over thirty years. It is also a strongly recommended technique as a tool for the accountability of education. It satisfies the need to have information on how resources have been allocated and offers evidence of adequate levels of returns on these resources. This sense of accountability has become a legal requirement in the U.K. under the provision of the 1988 Education Act. This act empowers the cost-effectiveness technique to be used as a means by which decisions can be made with concern of the allocation of resources. Cost-effectiveness technique can also be used to analyse existing provisions in order to advise on alternative strategies that might be employed.

These sections on the theoretical background of the study will describe the conceptual framework of cost-effectiveness analysis by looking first at the concepts efficiency, effectiveness and then at the idea of costs in the educational provision. These sections will also elaborate on the other associated tools of educational performance analysis: educational production functions, effective school literature and performance indicators. After the theoretical, in depth, discussion of the above concepts the analysis will turn to the technique of cost-effectiveness analysis as it is used in education and will draw the general theoretical framework of this study within the model it will establish and always in the perspective of formatting educational information systems (Willms, 1992). This theoretical model will form

the specific framework of the empirical study which will be described in the chapter of methodology.

The rationale behind this trip in theory is that, without a frame of reference, results and decisions of any kind could become purely arbitrary. Despite the fact that cost-effectiveness analysis is considered an evaluation technique of a wide framework (Blaug, 1970), when compared with cost-benefit analysis which is a closely related technique, it is given less attention even in the pages of comprehensive reference books such as Cohn and Geske (1990). There are, of course, several important texts found on cost-effectiveness analysis. One of the most significant is that of Levin (1983): 'Cost-Effectiveness: A Primer', in which procedures for carrying out this technique are established.

The predominance, however, of cost benefit studies in the educational sector is obvious, probably because the application of cost benefit techniques outside of education has bequeathed the technique an economic rigour that has not yet been awarded to cost-effectiveness analysis. Simkins (1987) and Tomlinson (1970) both point to another factor that contributes to this widespread predominance of cost benefit techniques: effectiveness must be specified in an appropriate way.

The technique of cost-effectiveness analysis has found a new relevance in the current educational climate in the U.K.. The terms 'cost-effectiveness', 'efficiency', 'value for money' and 'performance indicators' are referred to in educational studies, studies by the Audit Commission (1984,1986,1992) and statements of government policy such as Better Schools (DES, 1985). A consultation paper (DES,1987a) which preceded publication of the Act in 1988 envisaged that:

‘ At the end of each year the LEA would be required to publish information on actual expenditure at each school which could be compared to the original plans. This information together with that required of governors relating to the achievement of the national curriculum would provide the basis on which parents could evaluate whether best use had been made of the resources available to the governors.’

The 1988 Coopers and Lybrands report on local financial management stated:

‘ The operating plans and budgets developed... should contain proposals with estimated costs for the curriculum and extra curriculum development and training, and building and grounds maintenance. Of importance at this stage would be a review of the ways in which continuing activities are carried out, with a view to ensuring the best use of resources and value for money... It will also be necessary to set targets against which performance can be measured’

(pp. 4-5)

Furthermore, the annual Expenditure White Paper of 1988 proclaimed:

‘ The government’s principal aims for schools are to improve standards of achievement for all pupils across the curriculum, to widen the choice available to parents for the education of their children and to enable schools to respond most effectively to what parents and the community require of them, thus ensuring the best possible return from the substantial investment of resources.’

A careful reading of the above extracts indicates the important relationship established between costs, efficiency and effectiveness which are central to cost-effectiveness analysis. None of these components, however, are unproblematic either in terms of definition or in terms of appropriate techniques of measurement. It is worthwhile, at this stage to consider these interrelationships, giving particular attention to how economists deal with the concept of efficiency and how they distinguish it from the concept of effectiveness.

2.2. Educational efficiency and effectiveness

2.2.1. General issues.

In the last decade there has been a great increase in the attention paid to efficiency issues especially in regard to the role education can play in development (e.g. Psacharopoulos and Woodhall, 1985, Thomas, 1990; Willms, 1992). This increased attention has been brought about by the constrained fiscal conditions under which, most nations are forced to operate. There has been a 'rhetorical' treatment (Windham , 1990) of efficiency in most national planning documents and the policy papers of the international donor agencies. Here, 'efficiency' is rarely operationalized and, even when used as a general concept, it is often unclear whether efficiency is meant to exist as a goal in and of itself or as a means to some other end. However, as Windham points out (ibid, p.10):

'...efficiency is considered to be an inherently good thing and efficiency enhancement activities often are cited as a means of increasing the availability of funds required to improve educational access and/or quality'

The 'efficiency movement' is viewed with suspicion by those who fear that educational efficiency will bring lower fiscal allocations. These critics, again, rarely define the efficiency standard or any other issues of relevance.

Over this decade, economists have concentrated on equally abstract, conceptual and definitional distinctions at the expense of more applicable issues of relevance to administrators and policymakers. The discussion of educational efficiency has been balanced between these polar forms of abstraction: the practitioners' use of efficiency as a totem-word and the economists' multiple use of efficiency as a context

specific concept. Both groups have paid inadequate attention to practical applications of the efficiency concept to educational activities. It will be clear later, that any operational definition of educational efficiency is subject to legitimate questioning (ibid, p. 12).

In this section we shall deal with the conceptual and definitional issues related to the measurement of educational effectiveness and efficiency. We shall, also, review the appropriateness of the application of the efficiency metaphor to education, propose specific definitions for common terms and especially those of efficiency, and effectiveness.

2.2.2. Educational efficiency-the concept.

It is surprising to those non economists to learn that the concept of efficiency is, in fact, a relatively new emphasis within the lexicon of economics. Part of the reason for this earlier lack of attention was that the efficiency concept was implicit to the market models developed by Western economists from the late 1700s up to the 1930s. Only in the last fifty years has great attention been directed toward issues of measurement and empirical testing of the deductively derived theories of neoclassical economics.

The result of this new emphasis on quantification has been to raise the issues of the operationilization and measurement of economic variables. The economist no longer can be satisfied simply to state that under a given budget, efficiency exists, for a producer when the marginal cost of an output from a production process equals the output's marginal revenue product or for a consumer when the ratio of the marginal costs of all consumption items to their marginal utility are equal. Of course, these abstract models have contributed for

understanding social and market phenomena. There has been, however, a recognised need to produce a practical and adaptable form of efficiency that can advance the management of private and social enterprise such as education, under certain assumptions. The economic concept of efficiency is a metaphor borrowed from engineering relationships and has been developed and defined by the economists of education in the recent years.

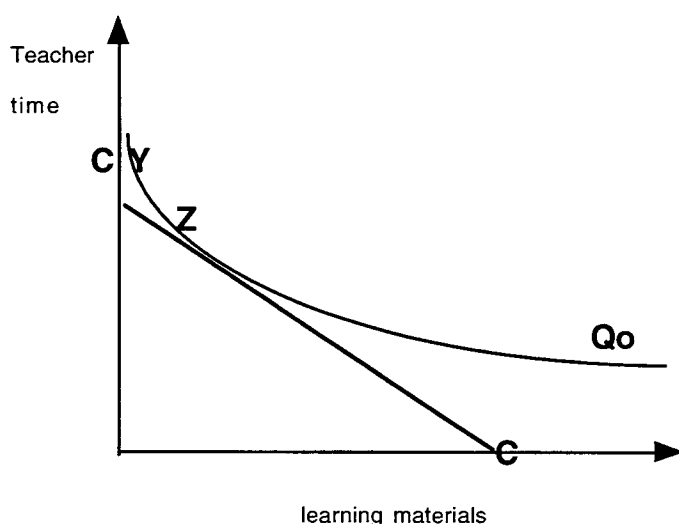
Blaug and Mace (1987) and Mace (1993, 1995) specify that efficiency can be divided into the concepts of *production* and *exchange* efficiency. *Production efficiency* can be further sub divided into the categories of *technical efficiency* and *price efficiency*. Technical efficiency is concerned with the maximum output which can be achieved from a particular combination of input resources. The concept of technical efficiency is of major importance when we consider educational production functions, which will be the subject of another section. Price efficiency refers to obtaining the technical efficient output at the lowest possible cost. It is referred to as *economic efficiency* as well, although a more rigorous specification of economic efficiency refers to the one that exists when there is production and *exchange efficiency*. Exchange efficiency is the one with which appropriate educational outcomes are matched with the demands of the society and is considered as a special case of *allocative efficiency* which refers to the demands of any interested group. Exchange efficiency is what Levin refers to as *Social welfare efficiency*.

Economic efficiency can be assessed from *internal and external* perspectives. When we investigate the internal efficiency of education, the concern is with how efficiently the education system is achieving the objectives it sets itself. Applying internal/external distinction, Simkins (1981, pp. 9-10, 67-68), Windham (1990, 165) and

Psacharopoulos and Woodhall (1985, p.207) use the term output to classify the immediate products of the system, such as examination results and number of graduates; these are differentiated from impact (Simkins) or outcome (Psacharopoulos and Woodhall) effects, which measure the longer term results of schooling on 'the ability of people to be socially and economically productive (ibid, p. 207). This is not a distinction generally observed in the literature which, often, uses them interchangeably (Thomas uses them in this way in his study).

Before proceeding to the definition of effectiveness, it could be appropriate to present these concepts of efficiency in a diagrammatic form.

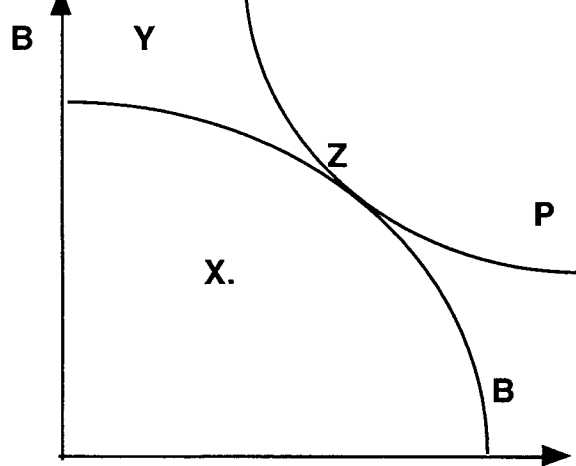
FIGURE 2.1.: Economic efficiency



In figure 2.1. the curve Q_0 represents technically efficient ways of producing student outputs (a production isoquant). Any point on this curve is technically efficient. The line CC represents relative cost of two inputs (iso-cost line): teacher time and learning materials. A move from Y to Z represents an increase in price efficiency as it costs less to produce a unit of output. Other points such as Y and Q_0 are

technically efficient but not price efficient.

FIGURE 2.2.: Efficiency in the case of two outputs.



In figure 2 the production frontier, which represents the technically efficient points of production, is given by BB. A move from X to Y illustrates an increase in production efficiency. If P represents the objective function of an education authority a move from Y to Z represents a move towards allocative efficiency.

Levin (1976) argues that it is possible to achieve technical efficiency with achieving price efficiency (to which he refers as allocative efficiency) and even more to achieve technical and/or price efficiency without achieving social welfare efficiency. This is shown in figure 3:

FIGURE 2.3.: Social welfare efficiency

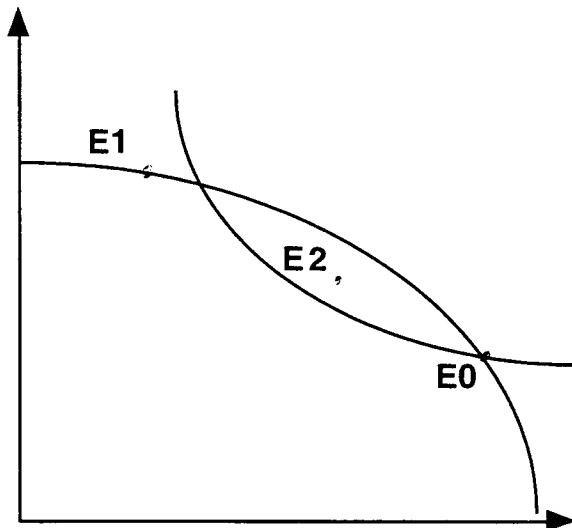


Figure 3 assumes that there are two outputs in the educational process. Given the production possibilities and community preferences the highest level of welfare is E1. E0 is produced efficiently as it is on the frontier, however it gives less satisfaction to the community than E1 or any combination in the area between the lines (eg. E2). In other words, 'it may be better to produce inefficiently that which is highly desirable to the community than to produce with perfect efficiency that which is of low value' (Levin, 1976, p. 155). In the section on educational production functions we shall elaborate on the ability of schools to be technically efficient and thus the appropriateness of the metaphor of production functions to education.

Given that the schools have several objectives , they have to be regarded as multi-product firms where output is the combination of several products. Indeed the range of objectives, and the likelihood that they are not complementary to each other, underlies Levin's (1976, pp. 154-5) category of social welfare efficiency. Since these outputs of education:

' probably have different corresponding values for different individuals, it may be impossible to derive a structure of outputs for any given input that maximises individual welfare and total social welfare. Perhaps even more important, without having some way of communicating true 'social' preferences among outcomes to the schools, it is possible that emphasis on productive efficiency may lead simply to the efficient production of non optimal bundles of outputs'

(p. 155)

This view of efficiency is seen by Thomas (1990) as follows:

' One advantage of this view of efficiency is that it provides a more general framework for thinking about differences in objectives and/or their weighting. By comparison the internal/external division is more open to the mistaken assumption that differences occur only along this boundary. It is also helpful in emphasising the place of value judgments about objectives in underpinning efficiency arguments.'

(p. 48)

It should be noted, at this stage, that the discussion on XE (*X-efficiency*) (production efficiency) theory (for a review see Sarayadar, 1991) has taken place within the theoretical framework of the definition of the different contexts of the concept of efficiency and its desirability. In 1987, Harvey Leibenstein (as reviewed in Sarayadar), the developer of XE theory, clarified these issues by writing:

'An important point is that productive efficiency is not the same as efficiency under which individual welfare is taken into account. It is easier to consider inefficiency in terms of output rather than welfare.'

(Leibenstein, 1987, p. 242)

' With respect to the general point that in some cases decreasing X-efficiency might decrease welfare, I agree that such circumstances exist. For example, if decreasing X-inefficiency results in unemployment this may result in a welfare loss. Clearly one has to analyse special circumstances to know in which direction welfare changes for given circumstances'

(Leibenstein, 1986, p.59)

Levin refers to one further concept of efficiency, that of *size*

efficiency. Even in circumstances where schools met all the demands of technical, allocative and social welfare efficiency

' inefficiencies might be introduced if the firms are too large or too small. Given the enormous size variation of individual schools and school districts, it is possible that both economies of scale do exist'

(Levin, 1976, p. 155)

Multiple outcomes of the process of education are frequently mentioned in the studies in this field. In the chapter on the review of the literature we present detailed accounts of the outputs of education as considered in several comprehensive studies (Rutter et al, 1979; Mortimore et al, 1989).

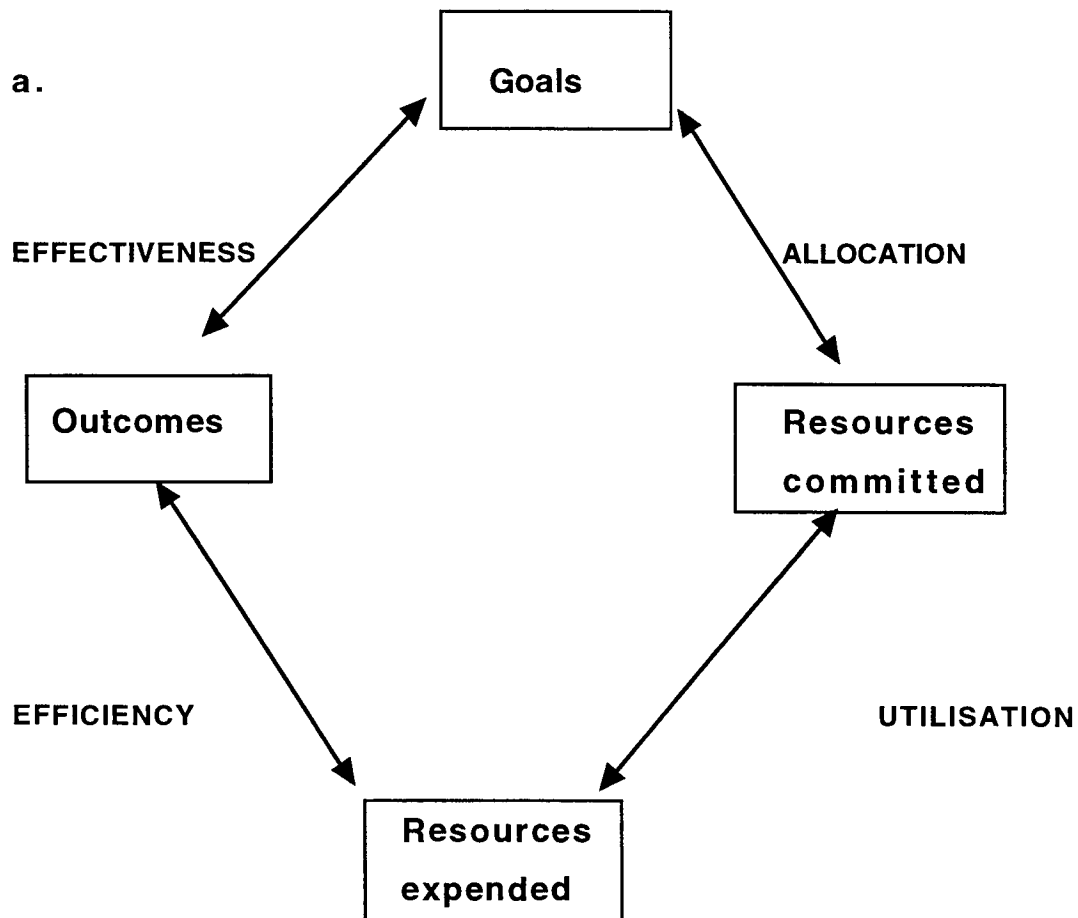
We shall now proceed to examine the relationships between efficiency and effectiveness

2.2.3. Efficiency related to effectiveness .

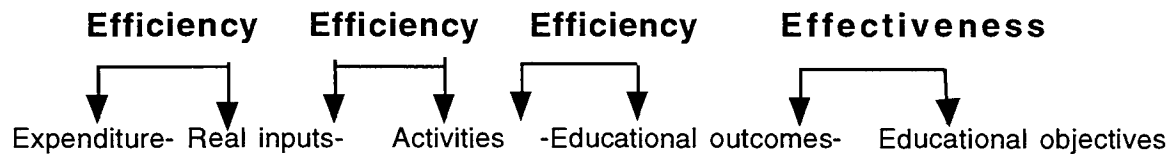
This above excursion into a more precise definition of the category of efficiency and its relation to the concept of effectiveness becomes clear when we consider the two financing models proposed by Levacic (1989) and Romney et al (1979) as they are illustrated in the figures below:

FIGURE 2.4.: The funding models

- a. The one given by Levacic(1989)
- b. The one given by Romney et al(1979)



b.



Both the above models indicate that effectiveness presupposes efficiency, however the proceeding analysis shows efficiency to be a multi-faceted concept and that the different levels of efficiency depend upon conditions that exist within institutions and values that are held by society at large. Therefore, the specification of these models require further qualification as to the nature of efficiency that is being referred to.

As it is shown in the diagram, the model of Romney et al represents a circular process whereby efficiency links expenditure on resources and the outcomes of the process and effectiveness links the outcomes and educational goals. The model suggests a reviewing process: as goals change and the degree of effectiveness of the system is assessed this in turn has an impact on new allocations and utilisation of expenditure.

Both the Romney et al and Levacic models express effectiveness as the link between educational outcomes and educational objectives. Effectiveness is most usually defined in this way: 'An activity is effective if it achieves its goals' (Dennison, 1978). Drucker in 1979, has made the distinction between efficiency and effectiveness in that: 'efficiency is concerned with doing things right; effectiveness is doing the right things.' Windham (1988) states:

‘ It is important to recognise from these definitions that the concept of effectiveness (how well or to what extent the desired outputs are achieved) is subsumed in the concept of efficiency (effectiveness relative to cost).’

(p. 13)

Thomas (1990), too, sees effectiveness as a narrower concept than efficiency, a subset of the efficiency framework which means that it is possible to be effective without being efficient but it is not possible to be efficient without also being effective. Scheerens (1992), also shares this view when he defines the economic dimensions of effectiveness:

‘ Effectiveness can be described as the extent to which the desired output is achieved. Efficiency can then be defined as the maximum output for the lowest possible cost. In other words, efficiency is effectiveness with the additional requirement that this is achieved in the cheapest possible manner.’

(Scheerens, 1992, p. 3)

Such a view is not shared by Atkinson (1983) or Simkins (1981) who use the term of efficiency in a slightly different way. They argue that it is not only possible to be effective but not efficient but it is also possible to be efficient but not effective. An example to support the first case is provided when a teacher achieves good examination results but, perhaps, at greater cost to other subjects of the curriculum. The example given for the second case is when a teacher teaches extremely well, achieving good exam results with limited resources but the syllabus does not truly meet the needs of the students or the objectives of the institutions.

Thomas does not agree that this second example is sufficient to demonstrate efficiency linked with ineffectiveness. The question needs to be asked: ‘Whose objectives are being used to assess performance?’ (ibid, p. 49) If the objectives of the student and the institution are used, then the teacher is neither effective or efficient since resources

have not been allocated to the right ends. However, viewed from the teacher's position the example might be appropriate.

At this stage, we should mention again that the debate on the effectiveness and efficiency of schooling depends a lot on the perspectives put forward by each participant when he views the above concepts, which, as discussed at the beginning of this discussion, lack of a definition of general acceptance. An example to demonstrate this lack of a generally accepted definition could be found in what Peter Mortimore (1991) says about school effectiveness:

'...whilst effectiveness and efficiency in some ways overlap, they do not necessarily represent the same qualities. Much will depend, of course, on the definition of efficiency, but it is possible to have a school that appears efficient yet is not-in the definition used earlier (effective school is one in which pupils progress further than might be expected from consideration of its intake)- effective.'

(S. Riddell, S Brown, 1991, pp. 3,4)

Obviously, the problem of the relationship between efficiency and effectiveness is very similar in many ways and interconnected to that concerning the appropriate definition of efficiency alone. Deciding upon what is the right objective requires combining individual objectives into some form of social welfare ranking. Since this deals with 'how one should define the "desired output" of a school' (Scheerens, 1992, p. 3) it includes problems of setting and defining goals, agreeing on the relative weight to be attached to different goals and setting criteria for evaluating whether goals are being achieved. This discussion could turn out to be on a philosophical sphere concerning the goals of education and its present and future satisfactions and dissatisfactions for the individuals and the society. A welfare-based definition does have, however, the advantage of alerting us to the need to place the discussion of educational effectiveness in the context of practice. This

problem of setting objectives cannot be avoided in cost-effectiveness analysis, and will be considered with other issues of definition in other sections.

2.2.4.: Educational effectiveness-the concept.

It is true that the characterisation of effectiveness in economic terms depends on the acceptability of a school being seen as a production unit (ibid, p. 4). A thorough discussion on this issue will take place in the section dealing with the educational production functions. However, at this stage, one could point out that the whole notion, theory and practice on effective schools takes place within the framework of production, no matter how this production and effectiveness are defined.

Most researchers in the field admit the above issues either directly or indirectly. However, a trip through alternative effectiveness views could offer a broader conceptual framework which is necessary for a more balanced position in such a study. The problem of defining school effectiveness could have been approached more directly by simply pointing out the obvious common ground it shares with the economic typification of effectiveness (with the broader perspective of efficiency and productivity as it was discussed above) and with the related organisational model of economic rationality.

Having all these in mind, we shall present the definition of effectiveness used lately which is an organizational-theoretical one. Attention has been given to how productive processes at each level of school organisation actually transform resources into school 'products'. This idea of the different levels has been labelled the multilevel perspective. It is related to the multi-level modelling in the

educational statistics (Goldstein et al, 1991). As currently developed among educational researchers, the multi level perspective address the constraints imposed by resource allocation decisions. It questions the nature of resources that come into play at each organisational level, asks how decisions about these resources affect other decision makers and examines how these various decisions affect the productive activities of schools.

The value of this perspective is that it shifts the focus of research on organisational outcomes away from the morphology of the school to the production processes themselves. As Reynolds points out (1992) there are still gaps in our knowledge in this field. In these terms, the social structure of schools can not simply be characterised as the resource stocks attached to various school-system positions. Rather it is the emergent frame within which the resources are put to use. A coherent picture of this frame is being developed by a number of conceptual papers (for a review see Scheerens, 1992) that outline the possible parameters of a multilevel model. A number of empirical studies contribute a lot by offering a framework for assessing school effectiveness that captures the interdependancies among levels of the school's productive system.

Although the multilevel perspective seems to chart the future for research on school organisation effects by overcoming the biases of the other models of organisational effectiveness, it could be of interest to summarise the organization- theoretical perceptions on effectiveness of the other models as they are presented by Scheerens (1992).

TABLE 2.1.: Organisational effectiveness models

<i>Theoretical background</i>	<i>Effectiveness criterion</i>	<i>Level at which The effectiveness question is asked</i>	<i>Main areas Of attention</i>
Economic rationality	Productivity	Organisation	Output and its determinants
Organic system theory	Adaptability	Organisation	Acquiring essential inputs
Human relations approach	Involvement	Individual members of the organisation	Motivation
Bureaucratic theory; system members theory; social and psychological homeostatic theories	Cont.	Organisation and individuals	Formal structure
Political theory of organisations	Responsiveness to external stockholders	Sub-groups and individuals	Interdependency and power

Given the diversity of views on effectiveness within organisational theory, Scheerens asks 'which position should be taken' and 'is it possible to develop, from several views, one all embracing concept of effectiveness'? (ibid, p. 6) Could we then argue that the future research on school effectiveness, through the multilevel organisational

modelling within the economic perspective, will be able to elaborate the linkages between the administrative organisation and decisions and those productive instructional processes that occur within schools?

Scheerens comments:

' To sum up, it can be established that the underlying model of school effectiveness research compared to other models of organisation effectiveness can be described as multi-level, process-product model of learning achievement propelled by the quest of knowledge of school reformers and national policy makers, in which as much use as possible is made of objective data, a short term perspective is discernible and assessment standards are largely comparative'

(Scheerens, 1992, p. 9)

Having considered effectiveness from a theoretical and a definitional standpoint, it is appropriate now to examine its applications in the evaluation process of educational activities. In this sense it is necessary to clarify not only 'what is meant by effectiveness but who is doing the measuring, why it needs to be measured and how it is being done' (Thomas, 1990, p. 27). It is also necessary to discuss on some gaps in our knowledge about school effectiveness particularly concerning the processes by which a school takes action to become effective, that is to improve itself. In examining the above issues we shall follow a quite similar categorisation to that of Thomas (1990), although it can not be considered as a distinct one. The linkage and the interrelationship between the questions 'who, how and why' is high and as a result the answers overlap in both theory and practice. Below we shall elaborate on these questions.

Who measures effectiveness

Responsible management, common sense, as well as political rhetoric call for an efficient education system. In any 'great debate' over standards of educational performance there are many interested

parties. These include the teachers, pupils and parents, employers, LEAs, the DFE, the churches, to name but a few. All have some needs which they hope and expect educational activity will satisfy. Education is often one of the largest enterprises operating in a country and the circulation of useful information within an education system is of paramount importance to all interested bodies, especially if improvements in the quality of education are to be made on the basis of informed debate. Thomas (1990) reviews some of the literature on the interested agencies in school effectiveness as follows:

‘ Slatter (1985, p. 46) provides a helpful diagram representing the range of agencies and organisations with some involvement in the government of education and Waddington (1985, pp. 100-4) discusses the role of the twelve ‘groupings’ most involved in the debate over the school curriculum, where one ‘group’ alone includes all the organisations representing the professional interest.’

(ibid, p. 27)

It is mostly an emphasis on the most effective use of resources which can be traced back to the financial and economic crises of the mid-1970s. Extracts from statements made during the general election campaigns in England indicate towards a more cautious allocation of resources to education. Thomas (1990) mentions statements such as ‘ The fundamental problem of all Britain’s social services is the shortage of resources.... In education above all the problem of resources is crucial’ (p. 1) and ‘ we are concerned to provide not merely more education but better education. Better education is not merely a matter of resources. It is a matter of standards and attitudes’ (p. 1).

However, phrases like the above carry meanings and implications which make them of little value to those working to improve educational practice. As Schultz (1963) states in his pioneering work, they may view such language, and the economic discipline to which they are related, ‘as an intrusion which can only debase the cultural processes

of education. In their view education lies beyond the economic calculus, because they believe that education is much more than a matter of costs and returns... The notion of "efficiency" is a red flag to most school circles' (Schultz, 1963, p. viii). It is a view well summarised by Woodhall and Blaug(1968) in their pioneering study of the applicability of economic concepts to the performance of the secondary school system.

' Educationalists are afraid that measurement of the productivity of schools will involve emphasising quantity at the expense of quality, if only because the quality of education is so difficult to measure. In fact, some critics go further and suggest that the most important educational objectives are in principle immeasurable, concerned as they are with a child's whole personality and character. In the words of one writer, 'anything measurable enough to satisfy the economist is likely to appear disgustingly mundane to an educationalists who is more concerned with the soul.'

(Woodhall and Blaug , 1968, p. 3)

The new responsibilities imposed mostly on schools by the 1988 Education Reform Act place a premium on the effective management of these institutions. Headteachers and other senior staff will have to perform tasks formerly undertaken by LEA officers. People with training and experience in curriculum and pedagogy will have to acquire new skills in staff management, finance and marketing to lead their schools into the competitive period the implementation of the Act brings. According to Bush (1989, p. 2) these people 'have a particular responsibility for establishing and maintaining an effective management structure'. The heads and principals participate in decision making and have a major role in maintaining good relationships with groups and individuals in the external environment that are interested in the effectiveness of schooling.

The movement towards increased school accountability which is related to school effectiveness is not, however, just a government

initiated process, but is seen as worthwhile by both customers and providers of education. For all these groups, a very strong case can be made for the careful study of school effectiveness research findings so that the reliable judgments are made about the effectiveness of different educational institutions and realistic objectives are incorporated into school quality and improvement plans.

At this stage, it would be interesting to note a piece from an OECD report on Schools and quality:

' The assessment of quality is thus complex and value laden. There is no simple unit-dimensional measure of quality. In the same way as the definition of what constitutes high quality in education is multi-dimensional, so there is no simple prescription of the ingredients necessary to achieve high quality education; many factors interact-students and their backgrounds; staff and their skills; schools and their structure and ethos; curricular; and societal expectations'

(OECD, 1989, p. 27)

The question 'who measures quality' is also related to the one 'from whose perspective is effectiveness judged'. All the above discussion indicates that school effectiveness may be judged from different perspectives (Scheerens, 1992, p. 8). With regard to another related question concerning which area of the education service should make most use of school effectiveness research, it is difficult to give an answer. There are examples of applications both within local school guidance services (ibid, pp. 7,8) and for education department initiatives in studies attached to national assessment programs and evaluation studies. Another category of potential users could be the consumers of education, parents and pupils. Last, within the prospect of self evaluation and improvement, schools could use these results to improve their own practices. A significant amount of work has taken place in this field in both theoretical and empirical grounds. A lot is

expected to be done in the future through the work that is done in the field, as it is justified in the following section.

Reasons for measuring effectiveness

All the above discussion made it clear that all those with an interest in education are concerned with its effectiveness as well. These could be the teachers, as well as the other 'stockholders' in the system. What are their concerns and interests depends not only on their personal and professional status and ideology (see N. Stuart in Ribbins et al, 1994), but on the nature of influence and power within the educational system.

With regard to teachers, their professional concerns with effectiveness can be worked out in most of the literature on how evaluation is embodied in education. It could be argued that, under normal circumstances, we would expect teachers to pay attention to the external valuation of educational objectives. Nevertheless, there a ground for disagreement about the objectives of schools, among teachers as well as those non-teachers who are concerned with effectiveness. These non-teachers are parties that have a legitimate and profound interests in educational performance. Of course, there is no guarantee that the criteria for assessing effectiveness reflect the goals of these external interests or stockholders. As already stated, this lack of consensus about educational goals is based 'upon fundamental differences of value about the purposes of education' (Thomas, 1990, p.29). It is also a matter of power in the system.

The educational system is a complex one and the influences and the

powers offer an interesting examination in the politics of effectiveness. It is worthwhile recognising that some groups may be more influential in setting public statements about objectives and defining criteria but others may be more influential in setting the objectives and controlling the resources at the transactional level in the classroom. One consequence of this sometimes weak linkage between publicly stated aims and actual outcomes is that the scale and distribution of resources, at levels above the classroom, may be altered in ways designed to reinforce the preferences of policy makers at that level. This, as well as other reasons related to public support, political and professional legitimacy show that the selection of measures for assessing effectiveness are not neutral in their consequences. As H. Goldstein said in one of his seminars at the Institute of Education, 'what is measured becomes important'.

In this sense, educational organisations adapt- to a some extent- their production to a better fit between the genuine output and the criteria for assessing effectiveness. That is to say that an effective output of the primary process (as organisational theory demonstrates), should be seen as the actual dimension of effectiveness. Alternative effectiveness criteria can be seen as 'means' or intermediary goals. Scheerens (1992, p. 10), presents a figure below to support his view on the relationship between the goals of the educational process, the means to achieve these goals and how these are related to the effectiveness of the educational process.

The view of effectiveness criteria described above is the one that we shall share in this work: the available effectiveness criteria are ordered as means to an end within the multi-level model of learning achievement (this model will be elaborated on later) and productivity is seen as the ultimate effectiveness criterion.

How effectiveness is measured

The already mentioned linkage among the questions examined in this section is obvious in this part of it as well. In examining how effectiveness of an educational activity is measured the reasons why institutions differ in their effectiveness can not be avoided, and this, in turn, opens up questions related to the assumptions which are made as to how institutions function. In a way, questions of criteria have this two step consequence. On one hand, the question of how effectiveness is measured is related to the 'learning value added' model as a means of measuring progress (Gray, in Plewis et al, 1981, p. 15) and takes into account all the other factors which explain why schools differ in their outcomes. On the other hand, the choice of criteria concerns some model of how institutions function and the judgments that are based on such a model.

The most widely used measure of institutional effectiveness is that of scholastic attainment (this was apparent in the review of the relevant literature). However, this immediately raises problems when making institutional comparisons because not only do the range and type of examinations differ widely from school to school but there is a whole variety of different inputs that may explain differences in examination performance. Here, in economic terms it is important to look at value added, or what the educational process has added to the outcome measure over a period of time. However, the extent to which the value added method controls the effect of any inputs is in considerable doubt. This matter will be elaborated upon in another section.

Goldstein (1994, in Ribbins et al, pp. 150,1), points out that in the UK it is now government policy to measure the quality of schools by the

average exam or test results of their students and to relate the fortunes of a school to these results via parental choice mechanisms. Goldstein critically comments on this issue and states:

'...the real difficulty with the use of student achievement to assess the performance of schools is that it is a very indirect measure of the effect that schools may have'
(ibid, p. 151)

In a quite similar way, Rutter (1983, p.3), not only remarks upon this emphasis but the tendency for most school effectiveness studies to rely on tests of verbal ability, despite the fact that:

'schools do not have the teaching of verbal skills as their main objective. Accordingly, the estimates of school effects have been based on measures that bear very little relationship to anything most schools would aim to teach.

As far as tertiary education is concerned, Johnes and Taylor (1990) elaborate on the criteria of the effectiveness of the university sector and they use the indicators of 'teaching' and 'research as the potential outputs of tertiary institutions.

There is a lot of work on lists of criteria of school effectiveness which relates to all the actors and the interested agencies. We can mention HMI papers (Ten good schools, DES, 1977, p. 35), the CIPFA consultation paper (1984) and the Audit Commission's reports on the Performance of Secondary Schools (1984) which contain their criteria for judging the ineffectiveness of the system at the beginning of the 1986 report:

'the quality of secondary education is a continuing cause for concern: the proportion of school leavers with any A-levels is still less than 20 per cent, almost where it was over a decade ago; and over 40 per cent of school leavers still have no O levels at grades A-C or their CSE equivalent. The proportion of students leaving at age 16 is very high by OECD standards; yet in more deprived areas especially, absence levels of 25 per cent or more are not uncommon in some classes. Sickness absence amongst teachers- a barometer of staffs morale- often exists 10 per cent on a typical school day... Clearly things can not go on as they are'

Nevertheless, from a theoretical perspective, it can be argued that these goals, criteria and indicators represent only the surface aims of schools, masking their real purpose. What a certain theory of schooling expects the purpose of schooling to be is a matter of its ideological perspective. At this stage we shall mention two of the most influential perspectives on the economic function of schooling which will be elaborated in another section:

- The classic study by Bowles and Gintis (1976) presents the purpose of schooling in advanced capitalist societies as the reproduction of social and economic advantage from one generation to the next. In Althusserian terminology, schools function as an ideological State Apparatus and merely ensure that pupils are made ready to reproduce the capitalist mode of production.
- The screening hypothesis provides an alternative perspective. This hypothesis suggests that another output of schools instead of students' cognitive skills, is that of signalling information to potential employers about the students relative abilities.

The above debate on the theoretical considerations regarding the effectiveness of the educational sector, questions the appropriateness and relevance of assessing school effectiveness and reinforces the issues surrounding the question of which measures might be acceptable. This whole framework of debate will be looked at in the following sections as well and especially in the one concerning educational performance indicators. Having referred to the concepts of educational efficiency and effectiveness from a theoretical and practical perspective, we shall now proceed to a closely related concept, that of educational production functions (EPF). EPF have been widely used to

measure educational performance.

2.3. Educational production functions

2.3.1. Introduction

One could list a number of reasons for which this short theoretical journey to the field of education production functions is closely related to any study on school effectiveness. Such a journey will offer an insight on any theoretical considerations in the field of educational performance. Below I name some of these reasons which justify this usefulness of EPF:

- EPF, as opposed to the school effectiveness research, has an underlying theory. This theory is related to the production as this is used in labour economics. As such it brings the ideas of the neoclassical economics and especially those of the market to education, for which it has been criticised. The issue of bringing the market to education is often discussed and critically commented on school effectiveness studies as well.
- The problems of the specification and measurement of inputs and outputs which the EPF literature deals with, are also faced in school effectiveness research.
- The time dimension for the educational productivity and the need for longitudinal models can be taken into consideration in the EPF studies.
- The different levels at which data on educational performance can

be collected is also elaborated upon extensively in reviews of EPF studies (Hasushek, 1989).

Educational production functions have developed from the analysis undertaken during the 1930's and 1940's by mainstream economists such as Cobb and Douglas into the links between output of manufacturing processes and inputs of labour, capital and technology. A production function is a conceptual construct used by economists in analysing the resource allocation decisions of firms and is interpreted as the relationship between inputs and output *mutatis mutandis*. It is a mathematical relationship between the quantity of the output of a good and the quantities of input required to make it. A production function for a firm simply describes the maximum output feasible with different sets of inputs. That is, a firm operating on its production possibility frontier (or transformation curve), must be technically efficient. This is a crucial point for Levin in examining educational production functions, as we shall see later.

2.3.2. The concept of E.P.F.

Production functions have been adopted by educational economists in order to explain the educational output of schools as a function of various inputs. An educational production function relates measures of the inputs into educational process to measures of educational output and is, usually, a linear multiple regression model. It is demonstrated in equation (1):

$$(1) \quad A_i^t = f (B_i^t, P_i^t, S_i^t, I_i))$$

where for the *i*th student:

A_i^t = achievement at time *t*

B_i^t = vector of family background influences cumulative to time *t*

P_i^t = vector of influences of peers cumulative to time t
 S_i^t = vector of school inputs cumulative to time t
 l_i = vector of innate ability

However, educational outcomes at a point in time for an individual are influenced not only by present observed circumstances but by past ones as well. Alternatively the function may be expressed in way which assumes that: equation (1) holds at some past time say t^* and considers the change in achievement between t and t^* as in equation (2) where the inputs are measured over the period t to t^* :

$$(2) \quad A_{it} = f^*(B_i(t-t^*), P_i(t-t^*), S_i(t-t^*), l_i, A_{it}^*)$$

The intention is to evaluate the power of different school inputs, taking account of the influence on a given student of home, neighbourhood and classroom peers. Psacharopoulos (1994) states that the availability of such information 'would allow us to fit a value added specification on an educational production function', for example

$$dA = (A_i - A_o) = f(P_i, Z)$$

where d measures the increment in student during the school year as a result of policy interventions P and controlling for other factors in which students differ. Comparison of the marginal effect of each input to its unit cost would allow us to conclude how good or bad this class has been in transforming resources into 'educational output' (Psacharopoulos, 1994, p. 34).

Were economics a perfect science and if the variables contained in the above model of production function expressed a definite and certain relationship between achievement and the various educational inputs, then it would be possible to specify the exact composition of inputs to maximise output; assuming the educational institution to be in a state

of technical efficiency. Unfortunately, economics has not yet reached this perfect state and there are many uncertainties relating to the input identification and measurement as well as to the output specification and measurement. In other words, there are difficulties causing divergence between conceptual and empirical models of educational production functions. There is also an intrinsic problem due more to education than economics which is that it is not possible to say whether for example raising students' grades from 40 to 44 is more, less or the same as raising it from 80 to 84.

2.3.3. Problems in the application of production functions to education.

Hanushek (1989, p. 33), commented on the conceptual foundations of educational production functions:

‘ The concept of a production function is a powerful pedagogical tool and, in its basic form, appears applicable to a wide range of industries- from education to petrochemicals.’

He, then, admits that the reality faced in education (and virtually other areas) is quite different from the pedagogical assumptions: the production function is unknown and must be estimated using imperfect data, some important inputs can not be changed by the policy maker, and any estimates of the production function will be subject to considerable uncertainty. In this section we shall attempt to clarify the the major issues faced in employing production functions for educational decision making, under the headings: specification and measurement of output, identification and measurement of inputs, efficiency in educational production and statistical issues.

Specification and measurement of educational output

Since educational production functions relate the various educational

inputs to educational outputs, obviously adequate measurement of educational outcomes is extremely important in such analysis. Indeed some reject this line of research because they do not believe that educational outcomes can be adequately quantified. A majority of production function studies measure output by standardised achievement tests scores, but others have used measures such as students attitudes, attendance rates, and college continuation or dropout rates. We have already gone through most issues related to the use of achievement as a measure of effectiveness in the previous section. Now, we shall refer to tests mostly from the economists' of education point of view within the educational production function framework.

Monk, (1990, p. 322), comments on the different educational outcomes and their relationship thus:

' It is difficult to separate educational outcomes from one another; education by its nature produces outcomes that are closely related. Even if it were possible to separate outcomes, it is not at all obvious how to sign weights to the various components'

Levin accuses studies which make use of such single measures of output and he claims that:

' Educational achievement is only one of many outputs of schooling and is not necessarily the most important one.'

(Levin, 1976, p. 163)

The process of identifying the school outcomes is an exhausting exercise and while it attends to the multiplicity of educational outcomes, it does not help when outcomes are mutually exclusive. The economists of education refer to the outputs of schooling in a more rational way. Cohn and Geske (1990) follow the classification of

Schultz (1963), within the Human Capital Theory: they consider two categories of outcomes consumption and investment . The consumption group of outcomes are related to the value to knowledge for its own sake and more specifically to the pleasure, satisfaction and other similar benefits that the students, their families and the society enjoy from schooling. These consumption experiences can sometimes be negative, when, for example a student would rather do something else. A highly important consumption benefit often overlooked by teachers and parents alike (Weisbrod, 1962) is that the family is relieved of responsibility toward the youngster during school hours. Society, two, gets consumption benefits in the form of reduced crime. Others talk about a negative output when they consider the type of crime committed by highly educated people today.

The outcomes in the category of investment refer to those that help students in their future life, usually within the notion of the Human Capital Theory which believes that people invest in education not only for present consumption but for future pecuniary or non-pecuniary returns. Here, we consider two dimensions of school effects: the effect on labour market performance and the effect on socialization-that is, political awareness, citizenship, moral values and so on. It could be argued that there is a variety of outputs related to the individual's or society's productive skills and future well being. There is a group of these outcomes which will not provide benefits to society until some time in the future. Examples are the vocational preparation, improved health habits, citizenship, self esteem and others.

In addition, it is obviously much easier to specify the types of educational outputs than to define them precisely. There is, for example, no general agreement on how self esteem can be defined and, even, it is not quite clear how a student's or a school's performance on

such outcomes can be measured. Cohn (1990) goes further saying 'Thus we find a number of different basic skills test batteries, all purposing to measure the same output'. Another question addressed quite frequently is not merely what the present level of skills is, but rather what improvements in basic skills have taken place over time (value added component) and whether these changes are consistent to other groups of students in the same institutions (time-longitudinal component).

Educational outcomes are distinguished in the relevant literature as cognitive and affective or non cognitive. This classification could be important since few non cognitive outputs have been incorporated into input-output analyses to date. Cohn and Geske (1990) find this distinction of little value from an economic point of view because 'both cognitive and non cognitive aspects of education provide consumption and/or investment benefits' (ibid, 1990, P. 164). They, then go on and list as many of the relevant outputs as possible and attempt to obtain reliable means by which such outputs can be measured. Their grouping is well organized for the schooling outcomes and worth looking at (p. 165). It is shown below:

1. *Basic skills*. There are many tests on these skills that have been utilized in one or more input-output studies of education.
2. *Vocational skills*. No systematic vocational tests of the type developed for basic skills have been used to assess the performance of vocational education. Instead market-oriented studies have been undertaken to assess the contribution of vocational education to one's employment opportunities and/or earnings (see Cohn, 1990; Psacharopoulos and Velez, 1985).
3. *Creativity*. This dimension of school output was long ignored in input-output studies, although some schools do attempt to foster creativity. Measures to assess the performance of schools in this aspect should include both creative output (a measure of consumption benefits) and increasing creative potential (investment benefits).

4. *Attitudes*. As already noted, attitudes are difficult to identify, quantify and even society is not unanimous about the 'proper' mix of individual attitudes. It is not, then, surprising that student attitudes have rarely entered a formalized educational input-output model. One of the main functions of schools frequently cited is the inculcation of 'proper' attitudes, such as those towards oneself, one's peers, family, the community, society at large, the school and the world in which we live. One might include in this category a school's attempt to influence a student's lifestyle, including career aspirations, health habits, and sex and family education.

Although the measurement of such outputs is difficult, it is not impossible. Instruments can be developed to measure attitudes the same way that tests of cognitive skills have been developed and utilized for over more than half a century (for such application of instruments to measure attitudes see Hazelwood, 1990). Cohn and Geske (1990. p. 165) comment:

' Psychologists have by now amassed an incredible amount of experience in measuring motivation, job satisfaction, and other types of attitudes, and similar effort can be directed to the measurement of attitudes that comprise educational outcomes'

Hanushek (1989, p. 34), writes:

Economists have analyzed the influence of education on earnings and labour market performance (Mincer, 1970, Rosen, 1977). Sociologists have explored the effects of schooling on occupational choice, mobility, earnings, and the relationship between schooling and personal and family characteristics (Jenks et al.,1972). These studies direct attention to the critical question of the role formal education plays in influencing later lives of citizens, a focus frequently lost on research into school operations.'

In general, the relationship between schooling and labour market performance, productivity and development is central to many policy questions related to educational performance. Of great importance

would be the mechanisms by which education affects later experiences. It could be argued that the assumptions underlying these mechanisms lack conceptual clarity. One commonly held presumption is that better educated individuals can accomplish given tasks better, perform more completed tasks or are able to adapt to changing conditions and tasks. An understanding of the mechanisms by which school interact with the work place could have important implications for studying the productivity and outputs of school.

The investigation of the individuals' position in the labour market is based on the schooling-earnings relationships. There is an uncertainty about the source of these relationships even within the Human Capital Model. This uncertainty is also highlighted by recent attention to 'screening' aspects of schooling (we have already referred to some aspects of this model). The view that schools may not produce more qualified individuals but simply identify the more able, has been the subject of both theoretical and empirical treatment by economists and sociologists.

The screening models were paid attention because of the lower social value of schooling they suggested, as well as the different link of schooling to economic growth and development and the revisions of expectations about future returns to schooling. The direct implications of the screening model for the measurement of educational outcomes and the analysis of educational production relationships should be that more attention must be directed toward the distribution of observed educational outcomes and their relationship to the distribution of underlying abilities. Unfortunately, no persuasive test has been devised to distinguish between the screening model and the more standard 'production' or Human Capital' model.

The arguments forth or against outcome measures used are very similar to that relating to school performance indicators, that will be looked at in subsequent sections. Some measures seem to have been chosen at random and do not always show any linkage to what one would expect to be a school output measure. Nevertheless, without an adequate theory of school production stemming from a relevant theory of learning, it is difficult to argue from a theoretical standpoint as to what is a relevant output measure and what is not. A similar problem exists with respect to input measures that will be elaborated on the following section. A theory could also link the inputs to the outputs by explaining 'what is producing what'. The organisational theory might help to explain the influence of organisational factors on 'educational production'. The theory of modernity and the theory of change should throw light on the educational process, its effectiveness and its improvement.

Inputs to the educational production process:

A common prescription for developing the relevant set of inputs to a production process in labour economics is to define the technical characteristics and specifications of the process. When considering education, the learning theorists are the ones to be guiding input-output analyses. In education, the rather fixed input of labour and capital (i.e., one teacher per classroom with relatively small variance in class size) implies that this simple description of inputs could explain little.

The choice of inputs seems to be guided more by data availability than by any clear preconceptions and general conceptual desirability. Monk (1990), has referred to a 'fishing expedition' for variables, this meaning the arbitrary way in which variables are selected, unrelated to any theoretical and systematical understanding of what variables are

appropriate. While Hanushek's (1979) listing of input categories (background, peer, and school) is relatively noncontroversial, the next step is more problematic. Clear and specific statements have to be made about which family background influences and which schooling resources are to be included. In an ideal world, there would be a well developed theory of learning to guide production function analysts in their search for specific inputs to include in their production function. Educational economists have frequently in the past criticised psychologists for failing to provide a learning theory; in its absence they are forced to choose variables on intuitive grounds, because they are important for policy purposes, or because the information is readily available. (see Bowles, 1970; Katzman, 1971 for this matter).

However, theories of learning do exist and they all these models emphasise the importance of time in the learning process which is cumulative with different factors reinforcing one another in the path towards learning. Many individual inputs into the schooling process that are traditionally used in production function analyses, no matter on which grounds they were chosen, are to be found in the learning models.

Hanushek (1989, p. 36) refers to a typical conceptual model of an educational production function, which is obvious even from the production function's mathematical form that exists. He notes:

' The typical conceptual model depicts the achievement of a given student at a particular point of time as a function of the cumulative inputs of the family, of peers or other students, and of schools and teachers. These inputs also interact with the innate abilities or learning potential of the student'

(Hanushek, 1972, p. 79)

The time dimension in EPF specification is related to the value added model. The basic idea underlying this value added concept is that institutions should be judged according to the change in their students

performance during their time at that institution. Clearly there can be a more complicated problem if the quality of intake differs across institutions. This can be, to a certain extent, bypassed by measuring comparative value added and deriving a scalar measure for it.

At the secondary school level, we can distinguish between inputs provided by the schools and those externally determined. Cohn and Geske (1990, p. 160), make a further categorization:

‘ Among the school factors, we may wish to further distinguish between easily manipulable factors and those not easily manipulated by the administrators. Among the non school factors, we may distinguish between those factors that affect a student directly and those affecting the student indirectly through a community’s environment.’

An issue which was given concern in the field of EPF is that of the *micro and the macro level* of the characteristics and analyses.

Macro level Studies in Educational Production

First, there are ‘macro’ organizational and process characteristics of the schools which represent clearly defined and reproducible educational practices. Data collected at this macro level should include information on class organization, curricula, length of school day and so forth. These factors can be accommodated more easily in the conceptual framework than in the empirical one. Investigation has been made along the line of estimating conditional production functions upon these factors.

Macro studies should involve comparisons, for example, between education authorities and even though data may be collected at the individual school or individual classroom level, the aggregation of the data that will be required for the analysis to take place means that

much of the internal variation in the data is removed. Classroom level variations in resource allocation will certainly be ignored. If capitation levels for classes are included, it assumes that each class receives an average amount. All the same, if teacher experience is included, it assumes that each pupil has an average contact with the teacher. The process classroom dynamics will be lost. The teacher will be assumed to allocate his/her time and experience in an equal way across the class.

Micro-level studies in educational production.

The second set of issues in the educational production concern the aspect of the micro process that are 'difficult to disentangle from the characteristics of individual teachers (such as classroom management, methods of presenting abstract ideas, and communication skills' (Hanushek, 1989, p. 38), and even more difficult to identify in the school climate and ethos. This second type of process effect creates more serious problems, both for the application of the general conceptual model and for the interpretation of any estimated effects. Many micro level decisions are difficult to observe or measure and, quite possibly, not reproduced. These are referred to as 'skill' differences. Once the possibility for skill differences is introduced, 'the language- if not the conceptual framework of production functions- begins to fail' (Hanushek, 1989, p. 38). Since it is difficult to specify what the 'homogeneous' inputs are, it is even more difficult to define what the 'maximum possible output might mean'.

These 'skill' individual differences are quite important. The great variance of decisions at the classroom level that these differences may cause can explain the apparent insignificance of macro-process variables (Armor et al, 1976), a situation supported by detailed

analysis of the implementation of innovative techniques at the classroom level) and analysis of the teacher performance and attributes in the classroom (Hanushek, 1972).

Studies on educational production functions using micro level analysis attempt to observe more closely what takes place at the classroom level. By nature, it will be a more costly form of analysis and open to many different problems. An observer should make regular visits to the classroom and observe levels of student attentiveness in order to be able to state categorically, if so, that a teaching resource has been distributed to certain students. Even two students sitting next to each other cannot be assumed to have received the same resources. This concerns the provision of 'stocks' or 'potentially productive resources' as flows. In chapter 12 Monk (1990) mentions some progress that has been made in reassessing actual resource flows in educational productivity studies.

Because of the difficulties of working at the lowest micro level, it is common for studies to work at the general micro level but to stop short of measuring individual resource flows. Analysts usually say that the data were collected at the classroom level and as result the educationalists believe that the results are representative of the average classroom. The truth is that a real micro level analysis would have spotted the true extent of variation about the average.

More effort should be devoted to understanding and measuring both the micro and macro organization and process characteristics of schools. The tradition production function holds the false presumption that schools systematically choose the best process given the inputs just like in the labour production the level of technology is given. In these terms estimates of education 'technology' must be made 'conditional

upon the chosen macro organization and process characteristics.'(Hanushek, 1989, p.38). As far as the individual teacher estimates are concerned, the estimated impact of teacher characteristics could consist of direct effects such as teacher experience and indirect effects of choices at the micro level. Recognition of skill differences, however, has implications for the discussion of efficiency in educational production that we shall have below.

The assumption of efficiency in education production functions.

General issues.

One important issue with the relevant policy implications is whether or not schools are efficient in production. That is, if the school production processes under study, are already technically efficient, it is a relatively simple matter to estimate the underlying production function. This means that, if the production function analyst has access to a sample of technically efficient processes, all that needs to be done is to trace the outcome levels associated with the various income combinations. In this case, the analyst can make the rather strong assumption that all actors involved in the production process are doing whatever they can to secure the maximum amount of output possible from available inputs. Then a causal interpretation can be attached to the estimated relationships between inputs and outputs by the analyst who, having also information about the costs of various inputs, along with estimates about their respective marginal products, can make recommendations designed to improve efficiency.

The problems of technical inefficiencies that may exist in education

are often mixed together with the problems of misspecified production models. Monk (1990, p. 336), presents two alternative depictions of educational input outcome relationships, panel A for specified models and panel B for misspecified models. There are difficulties in deriving policy recommendations from production function research in which either the model is misspecified or the available data are drawn from technically inefficient production processes. Since there are good reasons to believe that both problems exist, reasonable amount of sensitivity is important in the study of educational production. In the exchange that took place between Henry Levin (1976) and Eric Hanushek (1976) the problems of technical inefficiency and misspecified production models are mixed together. In the discussion that follows in this section they are kept separate, as in Monk's elaboration on the relevant chapter of his comprehensive presentation (1990). In this sense, the section will proceed by examining what technical efficiency would mean in the presence of a complete and properly specified production function model.

It is obvious that model misspecification arising from the numerous difficulties with conceptualising and measuring inputs and outcomes makes depictions of relations between inputs and outcomes in educational context more likely to resemble what appears in Panel B. If however, this were the only problem in applying production functions to education, the next step to take would be to search further for better specified models in order to find relationships between inputs and outcomes that look like Panel A and adhere policy recommendations could be made. At this stage, a review of Levin's (1976) points on technical, economic and social welfare efficiency in educational productivity is considered important in understanding the complex relationships of these concepts in the educational production and contribute to the discussion on the existence of inefficiencies in the

educational production.

Levin (1976), argues that almost all studies of educational production functions assume that schools are technically efficient, that they are maximizing their output given the input mix which they have selected. The implications of this are shown in the Appendix . Levin believes that it is possible to achieve technical efficiency without achieving economic efficiency and even more to achieve technical and/or economic efficiency without achieving social welfare efficiency.

However, improvements in model specifications will be of limited value if the process under study, that is the educational one is in fact technically inefficient. In this case, even if the production function is correctly specified, the depictions of relationships between inputs and outputs will still look more like Panel B than Panel A (Monk 1990) and policy implications will remain ambiguous and even misleading. In the light of the seriousness posed by the problem of technical inefficiency in the educational production, it is worth the effort to understand what it means and how it is likely to exist.

There are two competing views in this framework. One is that there is an educational production function and the competing one is that the educational production function does not really exist. If we assume that there are systematic relationships between inputs and outcomes, this means that the existence of educational production functions is taken as given. We then come to the key question of how do the various actors relate to the educational production function.

At the one extreme it is possible to question whether actors and/or managers within educational organizations (administrators, teachers, students, parents) are goal-oriented and purposeful (Monk, 1990, p.

329) and, even further, if the managers fulfil the six conditions which the economic theory uses to explain technical efficiency in firms operating in a competitive, private industry. These six conditions are:

1. Managers have the knowledge of the production process and outcomes.
2. There exists substantial management discretion over which inputs are obtained and how they are organized in production.
3. There exists competition between firms.
4. Prices of inputs and outputs are available to educational managers.
5. There is an aim incentive reward structure of firms related to their goals.
6. There are clear signs of success and failure in the market.

Levin's argument is that none of these conditions apply to education, a situation that leads him to the conclusion that it is a serious mistake to assume that schools are technically efficient and this is multiplied by the fact that studies assume that schools are maximizing a single output.

Levin has been attacked for being superficial and simple minded (Watts, 1976, p. 197) considering that all firms in private, competitive industry fulfil these 'six conditions'. It is true that some of these firms are not 'working' on their frontier production function, that is they are not technically efficient. Nevertheless, it does seem reasonable to suppose that firms are more likely to have incentives for achieving efficiency and maximizing output than do institutions in the educational sector.

Generally, there are good reasons to believe that technical inefficiencies do exist in the educational sector and have important implications for the use of educational production functions as policy guides. Even if the

administrators knew the educational production function and through that the most productive use of resources, there are still serious limits on the administrators' ability to engineer the use of resources 'in the indicated fashion' (Monk, 1990,p. 340). Monk, then, goes on and states:

'The resource might be available, but the degree to which it is actually used-i.e., flows- is an entirely different matter. The availability of resource can be thought of as a necessary, but hardly a sufficient condition for ensuring the resource's use. Part of the 'problem' facing administrators is their limited control over teachers and and their activities. Added to this are the constraints on administrative discretion imposed by more centralised authorities.'

(ibid, p. 340)

Unfortunately, the pursuit of unwarranted policy based on incorrectly specified models in which technical inefficiencies may be extensive can serve to reduce rather than enhance educational productivity. Levin points out:

'Given the high probability of technical inefficiency, estimates of the production function of this output (achievement) are likely to lead to biased coefficient and misleading implications'

(Levin, 1976, p. 164)

A demonstration of such a case is done by Levin (1976) and a summary of this is presented in here. Had the process been technically efficient, as discussed above, the specified production function would have been as in Panel A. If, however, the relationship is like the one shown in Panel B, then there could be a number of possible explanations. First, it may simply be that the processes being observed are not technically efficient (this point is well presented by Levin, 1976 and it will be elaborated later). An alternative interpretation stresses the importance of ensuring that the production function is correctly specified through the collection of more and detailed data and the correct measurement of variables, before making judgments about the

presence or absence of technical efficiencies (Hanushek, 1979).

Regardless of which of these two interpretations is correct, policy makers face serious problems when they wish to base resource allocation policy on the results of production functions. If technical efficiency does not exist, it can not be assumed that the actors involved in the process are seeking to produce on the frontier, that is the maximum amount of output from the available inputs. In cases like this, changes in the supply of any particular input will have no predictable effect on the outcome. If the problem concerns the specification of the model, again there is not an indicated way of changes in the outcomes from a specific change made in the inputs. In this case the model simply fails to account for what actors contributing to the production process are seeking to accomplish. No causal framework can be used for the estimates of relationships between inputs and outcomes.

Levin (1975) who deals with the problem of technical inefficiencies in education and E.P.F. concludes: If we implement policies based upon estimates for the production function of the industry as a whole we will actually contribute to increasing the inefficiencies of the industry.

Levin acknowledges that this situation is difficult to test in practice although the educational sector consume a considerable proportion of national resources. Education has as an industry characteristics that make it a prime candidate for a study of efficiency: size, rising costs and questions for quality. When Levin published this article he realised a considerable rise in real cost per student at all levels of US educational system, without considerable rise in outcomes. We note

that Blaug and Woodhall (1965) reached the conclusion that educational productivity had declined in the UK. Although they acknowledge the quality changes, we are left with the impression of steadily diminishing educational productivity.

This pessimistic view suggests that rising costs in education are inevitable because of no substitution of labour-capital and no economies of scale. The optimistic view is that the tools of economic analysis will uncover inefficiencies which can be removed by estimating the least costs solution to educational productions. In other words the problem is one of economic efficiency. Watts (1976, p.197) says that Levin's argument about technical inefficiency does not suggest progressive inefficiency through time and therefore can not explain the rise of costs. But, if we add the point that technical inefficiencies lead to misleading estimates which produce policy proposals likely to cause an increase in economic inefficiency we do have a possible explanation for the rise in cost.

As Hanushek demonstrated in a survey in 1972 technical efficiency was not a serious problem, but economic was (1976, p. 195). We may say that Levin's criticism of production functions is not as important as it may first appear. Even if he is right in arguing that educational production functions represent what is being achieved in schools rather than stating what could be achieved with complete efficiency, work on production functions can still be of value in providing information relating to resource allocation. The better specified the models, the more this will be true. Nowadays, research on effective schools and especially on the identification of the most effective school or exemplary school offers concerning the 'frontier' educational production function. Many researchers speak about ways of 'testing' the estimated production function as well as any movement towards the NE

of the 'frontier' and the position of each school to that (Mace, 1995).

The next group of considerations is concerned with some statistical and methodological issues which have brought problems to researchers wanting to apply production functions to education.

Statistical issues and other methodological problems

Selection of functional form.

There are a number of theorems provided by the economic theory for the specification of a production function. One example is the assumption that each factor of production should be subject to diminishing returns such that successive additions to any factor of production, when all other inputs are held constant, should result (at some point) in successively smaller increments to output.

A linear relationship between inputs and outputs is commonly used and could be empirically valid to the extent that the curvature of the total output function is only mildly violated by employing a linear approximation. There is a case, however, that a linear approximation will seriously distort the true relationship between input and output. Moreover, conclusions derived from linear analysis should not be used for the purpose of extrapolation beyond the sample observations. Even, conclusions derived from models that employ curvilinear analysis should be treated with similar care. In this case, the shape of the production function may be different from that assumed or inferred at unobserved input levels and thus the dangers of extrapolation errors remain.

The major objection to the linear formulation of the educational

production function is the constancy of the marginal products of the inputs. If the analysis is to be used for relatively large changes in inputs, a nonlinear production function should be estimated. Although nonlinear production functions have been estimated, the linear form is very popular probably because of the relatively simpler form of approximation.

Basic methodology.

The choice of statistical techniques depends upon both the specific purposes and the empirical specifications of the models. There are always the policy purposes concerning the effects of policy changes on outcomes such as achievement. In such cases estimation of regression coefficients are generally desirable and analysis of variance techniques will not be appropriate (Hanushek and Cain and Watts, 1970). The specific technique is, however dictated by the structure of the models. For example, while ordinary least squares is often appropriate, alternatives are called for when there are simultaneous relationships. Or when aggregate school data are employed (see the review of the literature for applications of the different techniques). We have already mentioned that, when researchers are interested in the change of students performance during their time in a specific institution, the value added technique is used.

The problem inherent to the use of sometimes naive value added models can, to a certain extent be faced by the use of regression analysis. In this case statistical methods are designed to estimate the functional form that best fits the observed scatter of data points. Multi-variate regression analysis allows a much richer variety of inputs to be considered than the naive value added models generally used.

The fact that education is a multi output industry and even more the problem that in education exist no prices for an objective evaluation of the relative worth of the various outputs is faced today by the technique of Data Envelopment Analysis which concerns the measurement of efficiency in non-market, multi-product organizations. Fortunately, recent developments in linear programming allow some progress to be made in evaluating the efficiency of such institutions. In particular the DEA can assess the technical efficiency of such decision making units but does not allow questions of allocative and economic efficiency (for a detailed presentation of the method see Dyson and Thanasoulis, 1991).

The DEA has been criticised by Goldstein (1990) mostly for the high level of data aggregation it uses. It should also be noted that DEA is not a statistical technique based upon probabilistic distributions and therefore the usual statistical tests of confidence and significance are not available. DEA can not provide a socially optimal set of input and output weights, anyway. It offers, however a way forward by enabling a value judgment to be made about efficiency. Goldstein (1990) believes that DEA is not designed to find the particular relationships between the inputs and the outputs of the educational process. He points out that there exists a model misspecification which can lead to 'absurt results (Goldstein, 1990, p. 43).

Level of aggregation.

When considering the level of aggregation the question that arises is regarding who's learning outcomes are being considered. Is it the learning of a nation as a whole, a state, a region within a state, a school district, a school within a district, a class within a school, or an individual student? Any of these levels is possible and others could

be added as well. As a general rule early production functions studies in education were specified at macro levels. In these studies there existed a level of in consensus on the ingredients of efficient schooling (see Monk, 1990).

However, this lack of consensus on the factors for efficient schooling that existed in the first group of educational production function research, can explain the subsequent trend toward specifying production functions at ever more micro levels. As we discussed, none of the levels is preferable to another on 'a priori grounds' (Monk, 1990, p. 326). Any level selected has advantages and disadvantages which we must always have clearly in mind.

While the conceptual model is at the individual student level and typically educational performance should be assessed on the basis of information collected at this individual level, much analysis, which relies on data collected for other purposes since information about individual students at many different institutions is very rare, is actually conducted at the more aggregated macro level. The effects of the estimates of such aggregation depend crucially upon the nature of the educational relationships.

Nevertheless, the most serious problem of aggregation is really one of errors of measurement. The analyst usually has individual data about students (such as achievement and family background), but only aggregate data about schools. The temptation is to use all available data by mixing individual characteristics with aggregate school data. If school factors relevant to the individual differ significantly from the average, aggregation generally helps. The errors of measurement for a model of average achievement and average characteristics are almost certainly less than individual achievement and average school

characteristics (Hanushek, 1972). The proper level of analysis depends on the nature of the educational relationships within the phenomenon being studied.

Longitudinal versus cross-sectional data.

In the version of Hanushek's production function the importance of time in educational production is high. This has been already mentioned in the discussion about resource flows. Of course, Hanushek noted that estimating such a production function would require an enormous amount of data, most of which would be not only costly but also impossible to collect. He responded through the value added approach which calls for longitudinal data, and at least two readings are required on achievement levels. Care must be taken not to include inputs that flowed previously and not to mix them with inputs following during the period. The need to collect data at two points adds to the cost and difficulty of conducting production studies, and ingenious methods have sometimes been devised to avoid collecting data second time (Bowels, 1970).

Miscellaneous Methodological Issues.

At this stage we mention a few of these problems for the sake of a more comprehensive presentation of the whole issue (for more detailed description see Monk, 1990, pp.333-6):

- Limited variation of the variables.
- Variables moving together.
- Simultaneity.
- Selection effects.

In the last section of this chapter a more specific elaboration will be

made on educational performance indicators with reference to their relationship to the educational productivity and school effectiveness framework.

2.4.: Education Performance Indicators

In this section I shall, mainly, carry out a critical evaluation of the way that effective schools and performance indicators literature have been used. Both concepts are part of the recent education currency and there is a considerable amount of information concerning the implications of their applications, though it is, yet, incomplete. More specifically, we shall describe and analyse the term 'performance indicator' by offering some insights into exploring the background to the general debate about educational performance and effective schools.

I shall, then, explore the factors that influenced the appearance and use of performance indicators in education and, especially, the ones that were most influential in the selection of particular indicators as components of an indicator system in education. When elaborating on the above, it will become clear that performance indicators are a good example of a tool of measurement used by policy makers that was promoted, mostly, by political agendas and are not embedded on any conceptual ground, on any economic or scientific theory. Both their content and the way they are applied or used could be fraud if the actors interested only want to have some measure of educational performance, no matter if this is linked to any sound theory in a consistent and meaningful way.

2.4.1.: Definition of the term 'performance indicator'

Although there is no general agreement regarding the definition of PIs (Performance Indicators), D. Nuttal (1994, p. 79) suggests the following:

"It is generally agreed that indicators are designed to provide information about the state of an education or a social system. They act as an early warning device that something may be wrong, much as the instruments on the dashboard of a car alert drivers to a problem or reassure them that everything is functioning smoothly."

The most common view of indicators is that they should be quantitative indicators. For example, in the survey under the OECD Institutional Management in Higher Education programme, an indicator is defined as 'numerical value...' and the OECD indicators project has taken the same view. Others take a much wider view, and would include descriptive or even evaluative statements within the scope of indicators (for example CIPFA, 1988).

A somewhat broader definition was adopted by Shavelson et al (1989, p. 5):

' An indicator is an individual or composite statistic that relates to a basic construct in education and is useful in a policy context.'

They deny that all statistics are indicators saying that statistics qualify as indicators only if they serve as yardsticks of the quality of education.

4.2.2.: Indicators in Action

The lists of 'potential' uses of PIs given in the literature is rather informative. Most literature in the U.S. was primarily concerned with measuring student performance at the macro level. Wyatt (1994, p. 108), quotes Kaagan and Smith (1985) which are typical in proposing that indicators may help educational agencies to further their reform efforts by:

- i) monitoring changes in key variables such as the quality of teaching and student performance, which would identify impending problems,
- ii) assessing the impact of educational reform efforts,
- iii) encouraging better performance by comparisons with other nations and states,
- iv) focusing attention on areas or institutions which require improvement.'

The OECD, in April, 1973, issued a short document entitled 'A framework for educational indicators to guide government decisions'. The 46 indicators described in the study were intended as measures of the effects of education on the individual and society. The organising frame for the indicators comprised six policy sectors. Other more recent publications- Cuttance (1989), Odden (1990), and Ruby et al. (1989) restate the expanded list of uses for indicators. Cuttance (1989) discusses these possible uses at some length as well as Wyatt who ends this discussion on potential uses of indicators this way (1994, p. 109):

- ' What they can do is to describe and state problems more clearly, signal new problems more quickly, and obtain clues about promising new endeavours...'

In the mid-1980's, a new scenario and new priorities emerged in the educational policies of many countries. The most common goal was one of improving the quality of education without adding new financial

resources; the efficiency and cost-effectiveness of education had to be improved. It follows that decision-makers attached great importance to the development of a coherent system for the monitoring and evaluation of educational progress. Apart from many ideological issues that mostly concern the lack of any sound conceptual model there are also methodological factors that obstruct the development of new approaches in constructing education indicators. There are also problems concerning the use of performance indicators by the policy makers

2.4.3.: Indicators in a political context.

As noted earlier, there is no clear agreement on exactly what an indicator is or is not; no particular insights are given by people dealing, in any way, with performance indicators. Their usefulness is taken for granted and the rationale behind any choice of specific indicators or any application in policy making is rarely given.

It can be said that indicator design involves an interplay of both technical and political factors. Even the 'basic' technical concerns such as the level of data aggregation, the specification of data elements in a calculating formula, the design of a data-collection strategy, or the choice of test items, do carry political implications. The history of the economic and social indicator movement of the 1960's shows that the transition from statistics to indicators is a delicate passage which shows that a major reason for the rapid demise of social reporting was that policy concerns were subsumed by research concerns.

The continuation of the work on education indicators critically depends on the continued interest and involvement of policy-makers who, as already stated, supported the revival of the indicators agenda in the

late 1980's. Implicit in this conclusion is the view of education that is found today in countries such as the U.K. and the U.S.A.. The monitoring of the educational process for reasons of accountability by public authorities makes education indicators attractive not only for the statistician or the academic but for the authorities in charge of the educational improvement as well as for the public at large. The conclusion is that the process of designing and implementing a set of educational indicators cannot be considered a merely intellectual exercise, however interesting this could be for scientists.

2.4.4.: Examples of the application of performance indicators in education

A recent example of the use of performance indicators in secondary education is the publication of league tables in England. The government claims that through making the GCSE and GCE A-level scores of the students of each school available to the public, it promotes competition between schools and this will result in improved standards. It has been accused for not being interested in fairness and that that the continued use of raw data may cause an eventual decline in standards. The main problem with these PIs is that they use data on the performance of the students of the schools in these exams and make no allowance for the intake of each individual school. Tables using indicators worked out through value added techniques are suggested instead because: ' If we have got to have league tables they should be value-added. We have to pursue excellence but we have to value every child' (Education Guardian , November 1994, p. 5)

The other example refers to the use of PIs in the U.K. higher education which came after the publication of the 1985 DES Green Paper. The government's obvious unease with the effectiveness and efficiency of

the university sector gave rise to the setting up of the Jarrat Committee by the CVCP. Its purpose was to inquire into the efficiency and effectiveness of universities. Among the proposals from the committee was stated:

‘ A range of performance indicators should be developed, covering both inputs and outputs and designed for use both within individual institutions and for making comparisons between institutions’

(Jarrat 1985, p. 36)

Among the indicators that were used by the Government and the CVCP to evaluate the outputs of universities, were unweighed degree results as used in Johnes and Taylor (others were also developed but we will not consider them here). Degree results was a PI developed to evaluate teaching performance. It certainly appears an attractive PI since a degree is the (apparently) most obvious outcome of teaching activity in Higher Education. Indeed the 1987 White paper makes it clear that academic standards and the quality of teaching in higher education need to be judged by reference mainly to student’s achievements.

However, before using these results as a PI we need to be assured that we are comparing like with like. The most obvious causes for difference would, Johnes and Taylor argue, be differences between student characteristics and difference in university characteristics. For example, are students attending universities of equal ability, is the gender balance similar, do similar proportions live at home, and is the language competence of all students similar? Of course, each one of these possible causes of difference is itself beset by problems. Research, however shows that actual degree results may be, at best, singularly misleading as a PI. To quote from Johnes and Taylor (1992, p. 15):

'... it would clearly be wrong to compare degree results between universities without taking into account the mean A level score of each universities student entrants. Other variables also play an important part...'

2.4.5.: Problems concerning the development of indicators.

I have referred above to some problems with PIs. Here I go through them more systematically, although most of them have been elaborated upon in the previous sections.

Measurement of education

The first point to be made is that the data collected on the outcomes of the education system are often not reliable and thus the usefulness of indicators is limited. This point is obvious if one recalls that for the most part only data on resource inputs and student flows are generally available and outcome variables, if included, are restricted to student achievement data and these are rarely connected in any logical way to inputs or processes

When Monk (1990) discusses educational productivity he accepts that educational processes occur in a variety of social, cultural and economic contexts. Differences in the contexts of education have resulted in different goals for education. The heterogeneity of contexts, goals and content has prevented the adoption of a common definition of student achievement. The result has been widespread disagreement about what constitutes good performance and which aspects of achievement one should be measuring.

The comparability of educational indicators.

This term refers not only to the technical requirement that the data should be standardised. It concerns the difficulty of obtaining data from authorities and reporting it in a common format that could make it, if possible, comparable. The two main obstacles are insufficient theory and inadequate knowledge about the comparative approach in education.

Organisation of indicators

Many epistemological and practical issues arise in the construction of a framework for the organisation of indicators. In one sense, any framework may seem as provisional. Some of the indicators used today derive from 'logical' relations among different parts of the education system and are empirical in nature, whereas others derive from practical concerns and are policy-sensitive in their orientation.

The nature of the linkages among the indicators is often unclear. Most writers and decision-makers believe that the choice of indicators serves a pragmatic purpose and is guided by research mostly on effective schools. However, there is not always a clear link between the indicators used and this research on effective schools, nor are all factors found to be linked with school performance 'translated', or capable of being 'translated' into indicators. Bottani and Tuijnman (1994, p. 31) see some of these problems.

Methodological criteria.

Of these criteria comparability has already been mentioned. Other

important criteria are accuracy, validity and interpretability. The production of high quality, accurate data is an obvious precondition for any indicator construction. The relationship between data producers, who are usually the researchers and data users who are the policy makers is an important determinant of the accuracy and usefulness of the information offered by indicators. Validity, which refers to whether an indicator actually describes the phenomenon it is believed to be associated with, is also very difficult to establish. The literature often refers to the fact that the education production model has produced debatably disappointing results (Scheerens, 1990a; Blaug, 1987). School variables did not show high correlation with output indicators. The above mentioned authors, however, dismiss the fact that the lack of a clear correlation between inputs and outputs could probably be explained differently.

Interpretability refers to the political context in which indicator information is read and applied. The validity of quantitative measurement in education is an important, but not a critical issue. Despite the strong skepticism among educators about the use of algorithms and production functions as representations of complex educational processes, the feasibility of reliably measuring important aspects of such processes is widely accepted by researchers in the social and behavioural sciences. This does not mean, of course that all epistemological and theoretical implications of this approach are well understood. Additionally, many technical problems still exist in the measurement of education inputs, processes and outputs. To mention one example, today multi-level statistical models are being used for the analysis of qualitative variables, but, problems still remain, some of which have already been considered in this section (for example the measurement of education and the comparability of indicators).

Having described the context, the problems and the use of PIs we shall proceed to the related issue of the models that have been used for monitoring the educational production.

2.5.: Models for Monitoring School Performance

In this section we shall examine some of the most influential models designed to monitor the performance of educational institutions. These models were influenced by the research on effective schools and contributed a lot to the development of educational performance indicators. We shall elaborate more on the ones that were important components in the choice of variables and analysis in this study.

As it was stated in the previous sections, research based on the 'input-output' model of schooling was criticised because it did not offer much to educators about how to improve school practice (Levin, 1980). Schools were viewed simply as 'black boxes' which begged to be 'illuminated' (Parlet and Hamolton, 1976, quoted in Willms, 1992, p. 32). The literature of the past decade emphasises school processes instead of resource inputs (Purkey and Smith, 1983). Researchers tried to define 'school climate' (Anderson, 1982) and 'school ethos' (Rutter et al, 1979), and to examine the effects of factors during the education process such as parental involvement, pupil-teacher, teacher-teacher, principal-teachers, principal-students interactions, norms and expectations.

The simpler form of a model that was taken into consideration in this study was that of Windham (1990, p. 20) which was titled 'Major factors in the education production process'. Explanations concerning the choice of specific variables and methodology are given in the book. The significant contribution of this work is that it does a

comprehensive discussion over all groups of variables and methodologies.

Most influential was the model proposed by Willms (1992) not only because of its comprehensiveness (which can always be questioned when dealing with a field like the one of education), but because of the cautiousness that it deals with every aspect of the 'monitoring' process. He says:

'Data on school process are important because they can be used to determine why some schools are performing better than others.'

(Willms, 1992, p. 32)

The model of Willms is not only an improvement over the basic input-output model. It also recognises the multi level structure of the schooling system which has already been elaborated upon in a previous sections. The model also separates school processes from factors that lie outside the control of teachers and administrators (compare to manipulable and non-manipulable inputs).

The book provides the rational for the selection of the variables in the set of pupil inputs which is reasonably complete. Any additional variables would probably be highly correlated with this set and probably redundant. This is also found in the recent work on 'Value added of GCSE scores' by S. Thomas and P. Mortimore (1994). However, the school effects literature provides little direction on which school process variables to include.

Willms stresses this:

'I doubt whether another two decades of research will yield better theories about how schools have effects on pupils' outcomes; nor will it help us specify a model for all

seasons-a model that would apply to all schools in all communities at all times. Even if we could come close to an ideal model, its complexity would be overwhelming and the data requirements immense.'

(Willms, 1992, p. 64)

Willms makes a comprehensive review of the literature on school effects concluding that it provides a rough guide for choosing process indicators. He lists the constructs that were found to have an empirical link with the educational outcomes . He points out, however that only a few of the findings have been tested in formal, 'true' experiments. Most of the work has been correlational and only a few studies have attempted to construct causal interactions across levels of the system.

Also, the reviews of the literature have not attempted to quantify the strength of the relationships between constructs apart from reporting their statistical significance. Finally, as already stressed, most of the research evidence shows links between ecology and milieu variables with achievement tests scores. Willms believes that the important process outcome links may be between social system or culture variables and affective outcomes. Having these in mind, he proposes the following criteria for the selection of process indicators:

- Which indicators provide a balanced picture of schooling across levels of the system and across types of constructs?
- Which indicators facilitate self-examination and the process of school renewal?
- Which indicators are seen as tractable variables by school staff and administrators?
- Which indicators are easy and inexpensive to measure.

Willms goes on to suggest specific measurement for each aspect of schooling processes which he describes as follows:

- I Ecology and milieu constructs
- II Segregation
- III Disciplinary climate
- IV Academic press
- V Intended versus enacted curriculum
- VI Pupil attitudes
 - Sense of efficacy versus futility
 - Attitudes towards school
 - Quality of school life
- VII Teacher attitudes
 - Sense of efficacy versus futility
 - Commitment and morale
 - Working conditions
- VIII Instructional leadership of principals.

The presentation of the model by Willms, as well as the discussion and the criticisms he makes, together with all the other relevant literature concerning school effects were most influential in the preparation of the methodology of the empirical work that this study is involved with. The special situation in which the Greek Supplementary Schools operate, the interests of all the actors involved and many recent individually specific studies influenced the drawing of the framework for this study. All these will be elaborated in the chapter of methodology.

However, a special reference on the application of the cost-effectiveness technique in education is, at this stage, considered important. We have referred to the empirical studies in the relevant section of the review of the literature. The journey through cost-effectiveness analysis, in the next chapter, will be of a theoretical

nature, relating the different concepts of cost to an educational context in such a way to allow a further relation to the effectiveness of schooling.

2.5 : Some concluding comments

This chapter was focused on some of the theoretical elements underlying the concept of educational cost effectiveness. The different types of efficiency was first clarified and related to the one of effectiveness with special reference to education. An elaboration on the concept of educational production functions and their specification was then made. A special reference was also made to the problems of the identification and measurement of the inputs and outputs of the educational process as well as to other problems concerning the application of the input output relationship to education. Then the tools of educational performance indicators were presented mostly within the framework of monitoring the school performance.

Sometimes a rather skeptical and even pessimistic tone was obvious in an effort to project the great care that needs to be exercised in an area with enormous policy implications. Through a careful examination of the advantages and disadvantages of different applications of the method, a thorough knowledge in the field was gained which is considered a major input to any type of research concerning school performance.

In the chapter that follows more specific elaboration will be made of the concept of cost-effectiveness analysis in education. A theoretical treatment of the concept of costs within the educational production will also take place. A review of the major concepts and methodologies which will be used in the cultural piece of work will also take place in the second part of the next chapter. This chapter will be considered

introductory to the one on methodology which will focus mainly on the specific theoretical framework of the empirical work designed and carried out.

CHAPTER THREE: Cost-effectiveness analysis in education- The cultural aim of the Greek Supplementary Schools.

3.2. Introduction

This chapter will firstly refer to the theoretical considerations which underlie the application of cost-effectiveness analysis in education. This piece of work will complement the theoretical framework which was examined in the previous chapter. The purpose of this thesis is also to examine the effectiveness of the G.S.S. in the cultural aim they pursue. The second part of this chapter will, therefore, elaborate on the main concepts which are related to the aim of helping the students of Greek origin to maintain their Greek origin. It will also elaborate on the main methods which can be used to test for the cultural aim of the G.S.S..

3.2.: Cost effectiveness defined.

Cost-effectiveness analysis is a type of cost analysis as far as it refers to a technique that compares cost and outcomes of educational alternatives. Its special feature, however, is that it measures outcomes in educational terms and not in monetary ones as cost-utility and cost-benefit analysis. This approach enables cost analyses of alternative strategies and their effects to be combined so that a particular strategy can be identified to meet a policy objective. CEA may be less demanding in its information needs compared with cost-benefit analysis and it can be combined with the more traditional approaches of educational evaluation. Levin (1983), in his most significant text: 'Cost effectiveness: A primer' in which he established the procedures for carrying out this technique, points out:

'Administrators view it as a method of choosing among competing alternatives in the light of constant or declining budgetary constraints. Evaluations refer to the tool as a way of providing more complete information for decision makers than the usual evaluation that addresses only the results of alternative interventions.'

And he even goes on to say that the significant advantage of CEA is that it is possible to compare educational programmes in terms:

'of their effectiveness on some criterion or set of criteria and to [bring together] these measures of effectiveness with the costs of alternative programs'

(Levin, 1983, p. 24)

So the case for using CEA is that it integrates the results of activities with their costs in such a way that one can select those activities that provide the best educational results for any given costs or that provide any given level of educational results for the least cost. As Stone (1994, p.2) notes in other words:

'..an approach which provides maximum effectiveness per unit of cost or inquires the least cost per level of effectiveness. However, the most effective approach is not always the most cost-effective.'

Thomas (1992) refers to CEA as a technique offered by economists for appraising public policy. CEA is appropriate to educational decision making because education is a social rather than scientific process (Stone, 1994, p. 2) and as such is characterised by a degree of subjectivity and a lack of experimental control. Stone (1994) quotes Thomas (1981, p.95) to show that CEA identifies the efficacy of a program in achieving different intervention outcomes in relation to program costs. Thomas (ibid) notes that CEA:

' can be applied to circumstances where the inputs into the process, such as the cost of a teacher's time, can be priced but where the nature of the outputs, such as educational attainment measures can not be convincingly evaluated by prices fixed in

the market.'

To enable a quantifiable comparison of cost-effectiveness between alternatives Marrinelly (1976, p. 321), as quoted in Stone (1994, p. 2), suggests that the development of a ratio based on the division of some effectiveness output dimension index by some cost input dimension index, would be appropriate. One can generally support the view that CEA should be a major topic of concern because it can lead to a more efficient use of educational resources, it can reduce the cost of reaching particular objectives, and it can expand what can be accomplished for any particular budget or other resource constraint. Policy decisions in the public sector must be based increasingly upon a demonstrated consideration of both costs and effects of such decisions.

It is important to emphasise that both costs and effectiveness aspects are important and must be integrated. Just as evaluators often consider only the effects of a particular alternative or intervention, administrators consider only the costs. In both cases the evaluation will be incomplete. Under CEA, both costs and effects of alternatives are taken into account in evaluating programs with similar goals. It is assumed that only programs with similar or identical goals can be compared and also that a common measure of effectiveness can be used to assess them. These effectiveness data can be combined with costs in order to provide a cost-effectiveness evaluation that will enable the selection of those approaches which provide the maximum effectiveness per level of cost or which require the least cost per level of effectiveness.

Stone (1994, pp. 2-3), lists some basic questions which need to be addressed when undertaking an economic evaluation of alternative strategies in the educational process:

- How may costs of an educational program be determined?
- How may school effectiveness be identified?
- How may an economic evaluation identify a level of overall effectiveness when education has multiple objectives?
- How can the relative importance of the multiple objectives which characterise education be determined?

3.2.1.: Costing an educational programme.

This study, as almost any cost-effectiveness study, will attach importance to an opportunity cost approach to the measurement of resources used in an educational program. The identification of costs should include not only the monetary costs associated with the provision of educational services but also the implied costs associated with opportunities forgone (that is sacrifices) either at a personal or societal level. Levin (1975, p. 98) notes that:

‘ the term cost refers to the monetary value of all the resources associated with any particular action, and their worth is in the most productive alternative applications’

The underlying purpose behind a cost analysis will determine the level at which it is undertaken, who is doing the costing and the selection of costs. More detailed theoretical investigation will be undertaken in the section ‘challenges for cost analysis in an educational costing’. At this stage, we can say that level may refer to society in general, the government either as a political party or as the institution of government (Stone, 1992).

Stone (1994) refers to the three dimensional model for categorising costs which was developed by Harrold (1982). He refers to these dimensions as valuability (the value of the inputs), temporality (the

time when these inputs occur), and distribution (of the inputs or costs).
When determining costs to be identified it is:

'crucial to know who the decision makers are, the political agenda within which they are operating, and the level of proposed policy implementation in order to understand the cost boundaries and the expectations and values underlying a cost analysis for an educational program.'

(Stone, 1992. pp. 2-3)

Types of cost for inclusion.

Simkins (1980, p. 83) emphasises the necessity of being cost conscious when costing an educational program. He states that it is important:

' thinking in terms of opportunity cost and alternatives forgone- than just budget conscious- thinking merely in terms of a decision's immediate financial implications.'

Stone (1994) suggests that costs that can not be readily associated with any one educational program should be treated as joint costs. These could be the capital items (which can be annualised), depreciation of equipment, rental value obsolescence of buildings. In schools examples of joint costs include the costs of library operations in a secondary school where the program seeks to establish the cost of educating one particular group of students, or the cost of a school central administration when the cost of running the sporting programme is being assessed.

In Harrold's model, some inputs can have a proxy valuation. The opportunity cost of the voluntary labour provided by parents or other members of the community or the opportunity cost of students in the upper-secondary (noncompulsory) years provide an example where a proxy variation is appropriate. Benson (1988, p 357) suggests that the opportunity costs value of time a student spends in school is the

average amount of money students of different ages could be expected to earn if they were gainfully employed instead of spending time on their studies. More theoretical discussion on the above issue will be made when investigating the 'challenges for cost analysis in educational costing'.

Establishing the cost for some educational programmes may require consideration of private and/or social opportunity costs (Thomas, 1992). The former refers to the forgone opportunities for individuals and their families because money spent by them in education is not available for alternative uses. Social costs include private costs and those costs which are shared by the community such as the lack of taxation revenue (less transfer payments) which would have been paid by the individual had that person been in the work force. Stone comments on the type of costs that is being considered to be necessary saying that it should be viewed:

' from the perspective of the broad political framework within which CEA is being undertaken.'

(Stone, 1994, p. 4)

Selection of relevant costs

In any cost analysis of an educational programme it would be desirable to include all costs of whatever type. This, however is proved to be time consuming and rather costly and may contribute not substantially to the final understanding. It is to a large extent a matter of judgment whether an identified cost is appropriate to include in an analysis and depends to the nature of the programme being costed. Stone (1994, p. 4), presents a table to identify in school recurrent costs which assumes that:

- items can be costed either directly through the market or by proxy;

- costs are incurred in the present; and
- the distribution of costs is highly program specific.

Thomas (1990, pp. 79-80) refers to three categories of institutional costs of provision: the one that can be described as institutional overheads, the one concerning the teachers' salaries and the one called capitation. He presents a detailed list of expenditure in the first category on the basis on which the data were made available to him by the LEAs.

Measurement of costs

The problem of measuring educational costs was dealt by many economists of education. Levin (1983) has recommended the ingredient method of measurement as opposed to the budgetary method. Ingredients are lists of items necessary for the operation of a programme. Stone (1994) considers the ingredients approach a superior method because it permits a more comprehensive analysis of costs to be made, and monetary costs are based on actual rather than planned expenditure.

One cannot say that the ingredients approach can solve the problem of joint costs. However, it does ensure that they are not ignored in the analysis. There is no clear, straight forward solution to this problem. Stone points out:â

' What is required is that reasonable criteria are established and that the methods used are defensible'

(Stone, 1994, p. 5)

Challenges for cost analysis in an educational costing.

Thomas (1992), makes a detailed journey in the different approaches to costs and his theoretical treatment of costs is very comprehensive. However, he does not go any further when he proceeds to his empirical study. We find the fact that he based his research on the analysis of costs as provided by Bowman (1966), extremely helpful for any CEA. This analysis uses the commodity approach but is influenced by other perspectives. It is worthwhile to mention the list of the six dimensions of costs that need to be clarified according to Bowman:

1. Who bears the cost-that is whose forgone alternatives are being examined.
2. The scale units in which the income alternatives are being measured.
3. The transferability potential.
4. The time dimension of forgone opportunities.
5. The knowledge and uncertainty dimensions of opportunity perceptions.
6. The institutional constraints assumed.

Once the alternative perspectives on costs have been identified and discussed, they cannot lightly be ignored. However, it is appropriate to emphasise the fragility of an all too easily assumed objectivity in this procedure. Below, we shall briefly discuss each question with special reference to research similar to the one of this study where necessary.

Who bears the cost

When we are dealing with post-secondary education, the principal policy question under this heading concerns the appropriate organisational form in which to place A-level provision, a choice which has implications for the student, the providing organisations and the society; consequently, it is these which constitute the three levels at which forgone alternatives will be examined.

The scale units.

There are two interrelated issues here. One is concerned with how the income effects of alternatives are to be measured and the other is whether there are limits to the level of application of cost analysis. This study, as an application of CEA, will follow the Bowman's framework which, although it 'brushes' the boundaries of competing costs boundaries (Thomas, 1990, p. 68) it can use a level of pragmatism to resolve some problems.

The issue of marginality is clearly relevant for how we assess the forgone income effect of alternatives. In any event, where very small changes are concerned, the income effect can be ignored and the same unit of measurement can be used for the individual and for societal costs. When, however, we try and look at things ex ante to consider major policy decisions for the future, the problem presents itself. This is because ex post aggregation at any level, already incorporates the working out of independencies that would have invalidated simple summation of micro ex ante estimates. Even when we are presented with a problem ex ante, Bowman appears to favour a costing which dismisses unemployment as a factor influencing the level of potential income in an alternative use. We shall be able to understand the position after clarifying the part of Bowman's discussion dealing with cost as 'what is put in' against 'what is forgone'.

For Bowman measuring 'what is put in' is not a measure of opportunity cost. If the idea of opportunity cost is used for 'what is put in', for example to cost student time, it is as a proxy measure. In these circumstances, she should not accept any adjustment for unemployment, stating:

' I would use as the best of the possible cost measures of student time the earnings of those of similar age, prior training and ability who are in employment. I would object to adjustment for the rate of unemployment on the grounds that we are measuring resources, not failure to use them... A pragmatic and likely rather than optimal alternative is the most appropriate reference value... we are trying to measure what is put in, which is not the same thing as what is forgone in any but the perfect equilibrium state.'

(Bowman, 1966, p. 431)

The 'what is forgone' test is more demanding. The opportunity cost view is merely defined by assessment of alternatives and cannot evade the problem of how to adjust for the existence of idle resources. Thomas (1992) discusses these views of Bowman and believes that the arguments she she puts in favour of her recommendations are quite strong saying that: the issue of marginality enables the unemployment effect to be ignored, in circumstances where the assessment is of past events, interdependancies have already been worked out, there is a case of consistency between 'what is put in' and 'what is forgone' approaches and finally, there is a belief that the time mature students put in their schooling is too important to be ignored. These points can not be accept unarguably and will be discussed in the chapter of methodology with special reference to this study.

The transferability potential.

At this stage Bowman decides to avoid the 'utility quagmire', choosing to include only what is 'marketable or potentially marketable' (p. 424). When we decide to use the commodity cost perspective, the costs will be collected the following way: students costs will be presented by earnings forgone data collected from careers officers in the Local Authorities. Wherever considered necessary, additional data must be collected via questionnaires or interviews. The budgetary costs can be collected from the funding bodies whichever these might be. It is

considered better if details on expenditure are collected from different sources as for example from individual school budget, from records held at the schools or the LEA. Information should also be gathered on expenditure on books and material. Earnings forgone and all other types of costs are considered together with the above to provide a measure for social costs.

The method considered above commits errors of omission and commission. There could be, for example unmeasured costs or unmeasured resources. The adjustment from money to real prices could be regarded as an error of commission. Levin (1983, p. 93) advises that when costs are spread over more than one year, the

‘ simplest way... is to assume that the increase in costs, on the average will reflect the general rate of increase in prices’

Houghs (1981, p. 82) is more cautious for two reasons. First he reminds the reader of the ‘relative price effect’, which tends to put prices up faster in labour intensive industries; second, if inflation on goods and services for education industry is at a different level to that for other industries the way of tracking changes in real prices should be by the use of an education index. This issue varies in importance according to the time period, the general rate of inflation and the project being studied. This is probably the reason that Stone (1994) repeats that the types of costs to be included in the analysis as well as decisions concerning their measurement depend upon the situation when the study is being undertaken and the project that is being evaluated.

Over several years the differences between education and more general indices tend to be slight but with variances depending on the level and the even or uneven spreading of inflation. When the interest in internal

efficiency, comparing movements of costs against performance in very similar institutions, the Retail Price Index is used principally to provide common basis for the comparisons of each cohort. Thomas (1990, p. 69) believes that:

‘ Any disturbances between price rises of different components of the same index, as well as differences between an education index and the RPI is likely to have negligible effect on these comparisons: for example, it would have some effect if there was a large difference in the capital/labour ratios in different institutions and the inflation rate of capital and labour diverged.’

Apart from the indexing problem, costing capital has special problems, the first of which is the danger of ignoring it altogether. This could arise when when evaluations use the institution’s budget and, if the building has already been paid for, it will contain no opportunity cost and, as a means of assessing this, Levin (1983, p. 67) advises that valuation be based either on rent on alternative use or amortisation costs. Of course these two measures are based upon rather different principles of costing- the ‘what is forgone’ as against ‘what is put in’ discussed earlier-and as such they can lead to quite different results.

Amortisation costs are a measure of the loan costs consequent to the original decision to build and, at any one time, may bear little resemblance to value in alternative use; an example would be the valuations of school buildings in a period of falling rolls. Cannon et al (1985) advise the researcher to:

‘ observe the rental price...the value of the highest bidder would place on the use of the facility’

and after a discussion they conclude:

‘ At a minimum our inability to to define a narrow range of estimates of stock values and therefore of rental rent...calls into question the analytical models that produce a single estimate of the cost of capital. Although observation of rental rates for private

facilities is theoretically correct, it is in fact not usually feasible.'

Thomas agrees with the remarks which he considers a reminder of the need to use sensitivity analysis on the amortisation data in his study.

The approaches discussed here of costing resources committed to projects, represent the objective tradition and are typical of cost and cost effectiveness studies. Levin's methodological primer certainly represents this tradition (1984, pp. 62-64). He remarks that market prices are the most common source of providing monetary values on ingredients, including those 'ingredients which do not have a competitive market price. He states (1983, p. 64):

' market price is a measure of what must be sacrificed in terms of the value of other commodities.'

It is, however necessary to connect the whole debate with the non existence of really competitive markets. The assumption the market prices represent the value of a commodity underlies Levin's arguments and is a condition of the existence of competitive markets . Sinden and Worrel (1979) are more circumspect in their use of market prices saying that market prices and quantities must be used with care in estimating values. They even go further to state that, because the implicit assumptions about perfect markets and the absence of externalities do not hold, market prices may need to be adjusted to present alternative net social benefits estimates. However, they make it clear that:

' Market prices are not useless... sources of value information. Where they exist they are usually the best indicators available. But that is exactly what they are: indicators. They do not measure values.'

(Sinden and Worrel, 1979, pp. 51-2)

In cost-effectiveness surveys, it is usually assumed that the analyst is objective. Drake (1982, pp 108-9) is very critical of this practice anyway. In his review of cost effectiveness studies in training he notes:

‘ In many of the studies surveyed it is not made clear that the economic costs of training are not objective phenomena... When an analyst borrows accounted expenditures without adjustment he employs his value theory just as much as when he values extra-market resources devoted to training. In both cases the equation of market price with value is a value proposition.’

The time dimension of forgone opportunities.

Bowman (1966, p. 424) points out that this time dimension can incorporate the time period over which costs are incurred when one activity is engaged rather than another, but it also, in her own words:

‘ leads to consideration of the extent to which present choices condition the range of future alternatives.’

(Bowman, 1966, p. 424)

This last point is relevant to a CEA of A-level provision, because the importance of performance at A-level in providing access to further levels of education, and the higher levels of income and status associated with higher levels of qualifications. Although Thomas (1990) promised to incorporate this question through the ‘ opportunity cost paradigm’, such an attempt could have been much more intensive. It might be important in any such study, if the students were followed later in their lives in order to find out if the A-level qualification was used to enter Tertiary education or to get a better paid job.

As to the first item of the time dimension dealing with the time over which costs are incurred, the time that a programme is taking place is

usually the measure. Any practical differences or problems concerning the different institution that implement a programme must be considered within the whole framework of the analysis.

The knowledge and uncertainty dimensions of opportunity perceptions.

This accommodates concern whether 'the best is actually perceived' (Bowman, 1966, p. 424). Of course the real world is of limited knowledge and uncertainty, which may partly explain the alternatives considered. Thomas's analysis was accommodated on the boundaries of orthodox theory that entered the territory of subjective costs. He practically applied this dimension by incorporating tests to evaluate the reliability of data and the sensitivity of selected measures of different judgments.

The institutional constraints assumed.

This issue is concerned with the options open to decision makers at different levels in the problems being examined. Students for example of A-level provision face given institutional alternatives and must choose from the menu regarding the days, hours, means of delivery. What is the role of the authorities in this situation?

These considerations will arise in later chapters when costs and outcomes are examined from the perspective of the different interests.

Technical difficulties in an educational costing

In addition to the challenges discussed above most of which are theoretical in nature and from one particular perspective, Stone (1994, p. 5) reproduces a list of points she had identified in a previous work

(1992, p. 8) which recognise a number of technical difficulties facing cost analysis in an educational setting. More precisely the points are:

- What is the appropriate basis for apportioning funds to a cohort of students who will be affected by the proposed programmes when the school receives a one line budget?
- Schools accumulate equipment which has a life expectancy longer than the year in which it is purchased and even longer than the time frame over which it is depreciated. What cost, if any, should be inputted to this equipment? Is it appropriate to deduct a 'salvage value' from the initial cost? In terms of capital items, Stone refers to Shugoll and Helm (1982) who believe that none of the following approaches: the original cost, the replacement cost, or the market value of the item provides a satisfactory basis for imputing costs. Further consideration on similar issues from a theoretical perspective was made on the section 'transferability potential' above.
 - How may the cost of utilities, such as power and water, provided to the school be costed to a specific activity?
 - If an annual value is placed on school buildings which reflects the depreciation rate, how valid is the chosen rate? School buildings are constructed of such diverse materials that some will last in excess of a hundred years while others have a life expectancy below thirty years. What consideration should be given to maintenance costs in this situation?

All these points that concern the identification and measurement of educational costs are but one of the sides of the cost effectiveness ratio which is the major feature in a CEA. Below we shall deal with the other associated issue that of school effectiveness.

3.2.2.: The challenge of identifying school effectiveness in cost-effectiveness studies.

We have dealt quite comprehensively in a previous chapter with the concept of school effectiveness. At this point, that cost-effectiveness is being defined, we shall remember the major points in a summative way. It is generally agreed that education has multiplicity of goals. The degree of achievement reached for each goal or objective provides an indication of the level of performance or level of effectiveness being attained by that school. Information on the effectiveness of an educational programme is usually gathered through performance indicators and is determined by the meaning that is attached to the term of effectiveness. When Stone refers to the use of PIs in C-E studies (1994, p. 6) she clarifies the meaning she applies to these concepts as such:

‘ The term ‘performance indicator’, in this monograph, refers to measures of effectiveness which are tangible, about which empirical data can be collected and which can be related to some clearly specified goal. ‘Effectiveness’ generally relates to a much broader concept which includes all the attributes of performance indicators but also incorporates those entities which are intangible and therefore cannot be measured in some numerical way, such as student motivation.’

We have already referred to the problems that any study which involves measures of effectiveness faces. The most important and challenging problem could be the one of identifying criteria by which effectiveness can be measured and to determine whether this effectiveness should reflect ‘school improvement’ or ‘school performance’. Stone (1994, p. 6) sees the former as a measure that relates to improvement over time, while the latter reports performance at a particular point of time. She goes on to recommend on how to deal with these problems in the way of value-added analysis which has been demonstrated in a previous section.

To judge the effectiveness of specific outcome measures it may be necessary to determine the value added over a given time period. To determine the value added requires that the planner has prior knowledge about that outcome measure. A data base needs to be established which could require some information on individual student attributes such as ability level. *Proxy measures-data* for this might be, for upper secondary students their junior certificate results. However, even if suitable proxy data are available this data will not measure student attributes of motivation and perseverance, both of which may be said to be key requirements in the learning process. So it is of considerable doubt the extent to which the value added method controls for the effect of any inputs.

CEA is a single factor ratio analysis, that is one input variable one output variable. Given the multiple objectives of education, there needs to be a way to combine the results of these multiple studies of outputs. The problems of assessing outcomes and giving weights to them are often faced by using the method suggested by DEA (Data Envelopment Analysis). But this method is not unproblematic either for a critique of DEA see Goldstein, 1990).

Having considered the two components of CEA that is that of costs and that of effectiveness, we shall now refer more precisely to the ways that the cost data can be combined with the effectiveness data that are usually the ones available from an educational evaluation, to create cost-effectiveness comparison. To make our discussion easier we shall assume that we are carrying a CEA of the A-level provision.

As Thomas (1990, p 74) points out it would be a simple ideal to use A-level performance as the level of outcome as it would have the merit of

being easily understood and would reflect the aspirations of those involved. As, however, was pointed earlier, one objective of a CEA would be to assess the progress made by students in the light of their ability on entry to the courses. It is for that reason that the measure of value-added is calculated using the GCSE grade as a proxy for the quality of students for entry. We then construct the CE ratio of the educational process we are examining.

It must be clear that the CE ratios measure only those items they purport to measure; the usefulness of these ratios then depends upon whether the selected objectives represent the preferences and rankings of those who could have a use of the information. However, what cannot be avoided is that any policy guidance arising from a CEA will have an unknown effect upon unmeasured outcomes. In the concluding part the discussion will go further to state that the CE ratio must be used with caution.

3.3.: Strengths and weaknesses of CEA.

The case for using CEA is that it integrates the results of activities with their costs in such a way that one can select those activities that provide the best educational results for any given cost or that provide any given level of educational results for the least cost. It is closely related to the efficiency of the educational production.

It is important to emphasise that both the costs and the effectiveness aspects are important and must be integrated. Just as evaluators often consider only the effects of a particular alternative or intervention, administrators consider only the costs. In both cases the evaluation is incomplete. Under CEA, both costs and effects of alternatives are taken into account in evaluating programmes with similar goals. It is

assumed that only programmes with similar or identical goals can be compared and also that a common measure of effectiveness can be used to assess them.

CEA has a number of strengths. Most important is that it merely requires to create C-E comparisons from data that are ordinarily available from an educational evaluation. It is useful to the evaluation of alternatives that are being considered for accomplishing particular educational goals. Its major disadvantage is that one can compare the C-E ratios among alternatives with only one goal. One can not compare alternative with different goals nor one can make determination of whether a programme is worthwhile in the sense that its benefits exist its costs. Whether society could benefit more if resources were used in some other way can only be ascertained through cost-benefit analysis.

Levin (1983, p. 3) points out that the limited use of CEA is due to the fact that few administrators and evaluators have received training in the development and use of this tool. Simkins (1987) and Tomlinsom (1970) both point to one failing of the technique in that effectiveness must be specified in an appropriate way and it is this factor that in part contributes to the predominance of cost-benefit studies. It could also be that the widespread application of cost-benefit techniques inside and outside education that has bequeathed the technique an economic vigour that has not yet been awarded to CEA. Things may not be quite as bad today as most of the arguments regarding the application of CEA to education are more or less still there.

The effectiveness-outcome criteria used in CEA that are mostly based on achievement, apart from the fact that there exist conceptual problems in connecting ability to the achievement in a particular test and use this achievement as a proxy to ability, they face the problem

that they ignore 'non pecuniary and psychic benefits... and the nature of the teaching-learning process (Drake, 1982, pp.105-106). One might add that they also ignore any 'negative utility' (Sinden and Worrel, 1979, p. 34) arising from the experience of the course. As education has multiple goals effectiveness measures should have their origins in the behavioural objectives of individual schools which, in turn reflect the school's goals. These are influenced by the community, regional state and national aspirations. At any point in time and over a range of schools the goals may vary. Nevertheless effective schools seem to be those which have enculturated their own goals, norms and expectations.

The problem of multiple outputs is treated by most economists of education. Psacharopoulos and Woodhall claim that in practice and at best there will be some trade-off between costs and performance (1985, p. 225) but, more likely, there will be multiple outputs or more than one party with an interest in the result. Thomas points out that in these circumstances an analysis must take account of the preference functions of interested parties which would indicate their order of priority among objectives. Blaug (1970, p.125) suggests that the planner presents several cost effectiveness ratios and decision makers attach their own weights to produce an answer. Levin (1983, pp.120-122) suggests that this weighting should be done by those persons that will be affected by them-that is the stake holders. Unfortunately, this leads to a comparison of individual weightings which has a shaky conceptual basis.

As far as the inputs are concerned we could say that they are associated with performance criteria as far as subjectivity in their choice and measurement is concerned. This problem of subjectivity led Drake (1982, p. 121) to say about CEA

‘ Cost effectiveness analysis does not offer less subjectivity and less use of judgment to decisions about the use of resources’

This is parallel to Levin’s conclusion (1983, p. 132):

‘ Perhaps the most important principle is that of viewing such studies as sources of information rather than sources of decision’

To sum up, CEA has its strengths and weaknesses. When used with caution and the selection and measurement of costs and effectiveness data is well informed by the conceptual and practical constraints of the technique, CEA can be a very useful tool in the hands of decisions makers that need to have an evaluation of an educational programme. CEA can be an important ingredient in the decision making process.

3.4.: The cultural aim of the Greek Supplementary Schools.

It is generally acknowledged by all actors involved in the education in the G.S.S. that these schools pursue the aim of helping the students to ‘maintain their Greek identity’ as well as the aim of helping these students get a good grade in their A-level exams. This is obvious in the proclamations concerning the establishments of these schools, repeated very often in the speeches made by officials of Cyprus and Greece and read in the documents that are circulated amongst these schools (references from the above are given in the introduction). Consequently, any study aiming to assess the effectiveness of these schools would not be considered an effective study unless some consideration was taken concerning this aim.

The theoretical framework on the cultural aim of the G.S.S. was not only wide and deep, but included many controversies as well. I had, however, to keep in mind that this piece of work would be

supplementary to the major study, though not of less importance. After becoming familiar with the relevant literature, I had to decide on the theoretical and empirical framework I had to place my research in. The first step, then, was to define the concepts I was going to use. I shall elaborate below on the operational definitions of the concepts of 'ethnicity', 'ethnic identity', 'culture', 'culture and language', 'ideology', and 'power'. The second step had to do with the choice of the most appropriate tool in 'measuring' the impact of the G.S.S. in helping the students in the A-level provision maintain their Greek identity. The decision was for the use of Conversation Analysis within the framework of Discourse Analysis. The reasons for this decision will be given below.

3.4.1.: General Theoretical Considerations

As the A-level Modern Greek is a language subject the first group of considerations concern the relationship between culture and language. We could not, of course claim that this relationship is only based on what is written in the white paper that the Greek Government has prepared for 'The education of the Greeks abroad' which states:

'The aim of this type of education is the teaching and the cultivation of the Greek language for the maintenance of the ethnic and cultural identity of the Greek and orthodox tradition of the Greeks living abroad...'

(White Paper, 1996, p. 1)

It is fast becoming commonplace to assert that literacy practices are not ideologically innocent (Welch and Freebody, 1992. p. 6). They do not merely meet cultural and individual needs: rather they shape both, the ways in which cultures develop socio-economic psychological dispositions and the cognitive strategies. The idea that

literacy practices are culturally and ideologically emergent is taken for granted by a certain number of scholars, educators and policy makers.

The present decade has witnessed a sudden boom in language teaching and learning especially in the language cultural context. Hymes' emphasis on the importance of the socio cultural aspect as a component of 'communicative competence' has greatly highlighted the importance of cultural aspects in language learning and teaching. Another influential stimulus has come from the socioeconomic system and the need of cross-cultural understanding.

Defining precisely what is meant by 'culture' is extremely difficult . However, some writers have attempted to discuss the relationship between culture and language. A review of two major writers which are Robinson (1985) and Loveday (1982) indicates that language teaching can not be separated from culture. Robinson clarifies one notion of culture as observable phenomena which is represented by 'behaviourists' and 'functionalists'; the former regard culture as 'discrete behaviours or sets of behaviours, e.g. traditions, habits, or customs, as in marriage or leisure (Robinson, 1985, p. 12), while the latter focus on 'the underlying structure or rules which govern and explain observable events' (Robinson, 1985, p. 12).

As Robinson points out the above two approaches to culture seem to be prevalent 'in classroom practices in second language and bilingual education' (ibid., p. 12). People who follow these approaches concentrate on teaching differences in behaviours, including such topics as customs, habits, attitudes, family, religion, etc. In addition to these two definitions, Robinson introduces two additional definitions of 'culture': cognitive and symbolic. These definitions are

'non-observable and internal to the cultural actor or learner' (ibid., 1985, p. 12) and which encompass 'ideas'. A 'cognitive definition' focusses attention on:

' what is shared "inside" the "cultural actor". What is shared is a means of organising and interpreting the world, a means of creating order out of the inputs'

(Robinson, 1985, p. 10)

If Robinson's definition is similar to Widowsson's (1979) procedural ability to exploit schematic knowledge, then we can perceive clearly the close relationship between culture and communication, cultural aspects being part of the communicative capacity. However, considering that language is deeply related to the cognitive and symbolic definition of culture, it seems essential that there should be a more explicit description of the inter-relationship between language and culture as well.

Culture affects language learning as it is a means of communication among members of a culture. In addition to the importance of language as a means of communication, it could be said that language is the embodiment of a culture. Loveday (1982, p. 3) sees language as a reflection of culture stating that culture involves:

' ...the implicit norms and conventions of a society, its methods of 'going about doing things', its historically transmitted but also adaptive and creative ethos, its symbols and its organisation of experience'

(Loveday, 1982, p. 34)

It could be said that this definition appears to be analogous to what Robinson calls 'cognitive' and 'symbolic' definitions which see 'culture' as a dynamic system- an ongoing dialectic process, giving rise to symbols which can be viewed historically. Billing et al (1988) in their book 'Ideological Dilemmas' speak about the historical

dimension of ideology when there is a flow of ideology through the thoughts and routines of every day life. Seeing ideology not in terms of single images or even single values we could consider the transmission of culture through language in the historical dimension of ideology.

J.R.Firth (1975) emphasises the relationship between language and personality. Firth states as follows:

‘Linguistics may learn something from the sciences which treat human beings as separate natural entities in their psycho-biological characters, but it is mainly interested in persons and personalities as active participators in the creation and maintenance of cultural values, among which languages are its main concern.’
(Firth, 1975, p. 186)

3.4.2.: Specific Considerations

Having reviewed these papers on the role of language in culture, one can see that there are certain similarities in their way of defining the relationship between language and culture. In this study the line of argument which regards culture as very much related to individual persons as creators of or ‘active participators in culture’, who themselves embody a certain culture. It could, then, be said that the idea is exemplified in the analysis of face to face interaction in that it is an ongoing negotiation process between individuals. In such a case individuals use language, to demonstrate their ‘persons or personalities’ and represent their cultures in the course of interaction.

This part of the study will be resting in the domain of cross-cultural communication between people of different socio cultural backgrounds, although they may have a ‘common origin’. Cross-cultural communication will be considered in the general sense and not the

'traditional' one. That is the study will take into equal consideration both linguistically and socio culturally oriented aspects. (Murata, 1994). It will examine any 'speech act types' with their differences and similarities. As Tannen (1984) clarifies, the notion of "cross-cultural" encompasses more than just speakers of different languages or from different countries; it includes speakers from the same country of different class, region, age, and even gender.

The intention will be to create as natural circumstances as possible during the conversations as the effort will be to interpret the speech acts in context. Our contextual frame will be the 'Greek culture' as a culture that is the 'object' of teaching in these schools. In this sense we shall firstly explore the conversational style or the way these students speak. According to Tannen (1984) such features include intonation, pitch, amplitude, pacing, rate of speech, turn-taking, choices of words and phrases, topics preferred and avoided, genres (story-telling, joking, lecturing), and ways of serving the constraints of these genres.'

A researcher should therefore not ignore the cultural differences of the participants which could lead to double bind communication. In the case of this study there could be students who have Greek as a first language (a minority of students who have lately arrived in England) and others that do not have it clearly as their first language as they usually speak in English. The analysis of conversational interactions between these two groups will be very detailed in this aspect.

Erickson and Schultz (1982, p. 7) realise the importance of becoming aware not only of the 'knowledge of culturally stylistic ways of speaking' but also of 'the knowledge of culturally stylistic ways of

listening'. Research on conversation mostly focusses on on ways of ways of speaking but not necessarily on ways of listening (Murata, 1994, p. 62). This specific research can not be specifically concerned with gestures and eye movement although occasional reference can be made if judged necessary in the interpretation of interaction.

Erickson's attention to the equal importance of both speakership and listenership in face-to-face communication must also be mentioned. The present study will try to avoid straight face to face communication by introducing the conversation in groups. There, of course, the situation is different and needs a different approach, one that will try to create 'natural situations' for the participants.

3.4.3.: Methodological Considerations

In search for a research framework for this part of the study, two major approaches to the analysis of conversation must be presented. Levinson (1983, p. 286) identifies these two major approaches as being 'discourse analysis (DA)' and 'conversational analysis (CNA)'. Although there are certain scholars that do not differentiate the two approaches (Cameron and Taylor, 1987), there are certain differences between the theoretical backgrounds of both: DA originates in linguistics, where CNA originates in sociology and especially that advocated by ethnomethodologists.

These two approaches may have different results with regard to the study of conversation. Following Levinson's distinction that DA is 'essentially a series of attempts to extend the techniques so successful in linguistics, beyond the unit of a sentence' (1983, p. 283) we see that DA employs the following procedures:

- (a) the isolation of a set of basic categories or units of discourse.
 - (b) the formulation of a set of concatenation rules stated over those categories (coherent discourses) from ill-formed sequences (incoherent discourses)
- (Levinson, 1983, p. 286)

It could also be considered that DA depends very much on 'intuitions' in deciding 'what is and what is not a coherent or well formed discourse' (ibid.).

Observing that conversation is the outcome of two or more independent, goal directed individuals with often divergent interests, DA alone with its rigid frameworks of analysis does not seem to be able to cope with the interactional side of the conversation. CNA, on the other hand has made important contributions to the understanding of utterance meaning and can add a lot when used together with discourse analysis. More on the choice of a method for the present study is written in the chapter of methodology. Having elaborated on the major theoretical considerations that underlie this study the next step will be to review the relevant literature and the empirical studies which have informed the design of this research.

CHAPTER FOUR: Review of the Previous Applications of Cost-Effectiveness Analysis of schooling.

4.1. Introduction

The applications of cost-effectiveness analysis in education are not as many as one would expect after reading the articles and books advocating its use. However, as it was discussed in the theoretical background of the research, the empirical work in this field is closely related to that in the fields of the input-output analysis, the effective school research, the performance indicators and even the instructional effectiveness research.

As this is an enormous area to elaborate on and, a selection of studies that were influential in the field is presented in a chronological and contextual order. The first section of this chapter reviews the early work of school effectiveness which dealt with the inequality of school effects. This work is distinguished from the later work on educational production functions. The next section presents a review of the 'effective school' research which is related to that of the 'performance indicators'. A section follows on the research on instructional effectiveness. In the last section of this chapter there is a review of the cost-effectiveness U.K. studies.

4.2.: Inequality of School Effects

In a recent examination of three decades of relevant literature, Scheerens(1990a) has identified four types of school effectiveness research: that on (in)equality of school effects; that on educational

production functions; the effective school research and the research on instructional effectiveness. Interest in the effectiveness of schools is not new, but serious efforts to measure the relationship between inputs and outputs did not begin until the late 1950's. As time progressed more studies began to utilise the more powerful technique of multiple regression, and multi-output models have appeared, along with new data bases at lower levels of aggregation (the schools and, ultimately students).

Early research on inequality and school effects, that is the work of the first generation of researchers in this area, can be summarised as consisting of input-output analysis (Monk, 1990), in which the background characteristics of the students were mainly studied. Research on the effects of school characteristics as an influence beyond the attributes of individual students was actually interrupted by the devastating conclusions of the first Coleman report (EEOS in Coleman et al. 1966), which stated that schools do not make a difference in students' achievement.

4.2.1.: The equality of educational opportunity survey

This survey was directed by James S. Coleman and his associates (1966), and it attempted to document differences in student achievement between schools and then, in the light of these differences, to identify policy manipulable variables which contributed to such differences. That is, it attempted to determine the school and non-school factors related to the achievement of over 600,000 students and 3,000 schools from coast to coast.

It concluded that differences between schools and the level of inputs to schools bore relatively little relationship to student performance: of

more importance, the authors averred, were such factors as students family background and the characteristics of other students in the school. Of the school factors, teacher's verbal ability seemed to be of most importance. The Coleman et al. conclusion that 'socioeconomic status [factors] bear a strong relation to academic achievement' proved to be extremely influential and stimulated a great deal of interest in the topic of school effectiveness. School effectiveness was then identified as the key report in the development of school effectiveness research.

The conclusion of this report can be summed up in the following paragraph:

Schools bring little influence to bear on a child's achievement that is independent of his background and general social context... this very lack of an independent effect means that the inequalities imposed on children by their home, neighbourhood and peer environment are carried along to become the inequalities with which they confront adult life at the end of school. For equality of educational opportunity must imply a strong effect of schools that is independent of the child's immediate environment, and that strong independence is not present in American schools.

(Coleman et al. 1966: 325)

The Coleman report has been criticised along three basic axes. First, there is uncertainty as to whether the measurements used are sufficient for the task involved. Second, the handling of the data is said by some to have been less than precise. Most astonishing, however is the fact that many contend that the manner by which the regression technique was used in effect stacked the cards against any strong showing by school factors.

Basically, this latter argument is that stepwise multiple regression requires the statistical assumption of independence of variables.

Where such independence is not present (i.e. multicollinearity is present), the first factors to be entered (in this case non-school factors) will appear most potent. In fact the non-school and school factors may be so nested within each other that their effects can not so arbitrarily be separated. This criticism has been expounded most persuasively by Bowles and Levin (1968, b)

Cohn and Geske (1990) believe that the Coleman report stands as a benchmark for a number of reasons. It was most influential in providing an impetus for theorists of all orientations to become more involved in what had previously been a very specialised and obscure branch of educational research. Its significance to the research into school effectiveness stimulated greater interest in other areas of school research and functioning.

Coleman's work is distinguished from most studies, past and future, by size of sample, number of variables, and the amount of data. The study used data from a large sample of individual students well distributed by type and location of school. Ninety-three separate variables were delineated. The outcome measure consisted of ten scores, including a measure of nonverbal skill. For many years research continued to be based on the Coleman data base, albeit alternatively supporting and debunking the Coleman's conclusions. The Coleman report is to be considered classic in the literature of educational assessment.

Samuels Bowles, along with Henry Levin, had criticised the methodology and the conclusions of the Coleman report, as was pointed out earlier. In 1968 the two authors (Bowles and Levin, 1968 b) reported results of a reanalysis of the Coleman data and found a significant positive influence of teacher verbal ability on both black and white student performance. Again, they also found teacher salaries

and availability of adequate facilities (particularly science) to be positively related to achievement.

Bowles, in 1970, employed a sub sample of the Coleman data , analysed it and his results show that verbal achievement of black male twelfth grade students was affected significantly by science lab facilities, days in session, teacher's verbal ability score, and average time spent in guidance- in addition to non-school factors such as parent's educational level and student attitudes regarding central environment and self-concept.

In 1970 Henry Levin attempted to use the Coleman data pool while avoiding some of the methodological problems of the original Coleman analysis. He specified two more output measures in addition to verbal score, the student and parent attitudes and student grade aspirations. He used a two stage least squares regressions (TSLS) and found that only teacher experience was positive and significant in terms of the verbal ability output.

In the same year Michelson (1970) published a report also using the Coleman data. Michelson added test scores for reading and mathematics as well as verbal ability. Independent variables were similar to Levin's. For whites, some school inputs were consistently positive using the TSLS approach for verbal ability. These include teacher's verbal ability and experience. Results are less consistent for other outputs. No significant relationships are reported for blacks.

A study by James W. Guthrie and his associates (1971) used the Coleman data for the state of Michigan. The group was stratified by socioeconomic status regardless of race. The authors report a series of school inputs positively related to achievement under the general

categories of facilities, materials, teacher's characteristics, and peer environment. Of the teacher variables verbal ability, experience and job satisfaction were significant.

Hanushek (1968) tried to find out whether school and non-school factors have a differential effect on blacks and whites. In his research separate regressions were run for black and white samples. The data used were all drawn from the original Coleman data files for the geographical areas being studied.

The U.S.A. Office of Education conducted considerable work to reanalyse the massive data supplied by the Equality of Educational Opportunity Survey (EEOS). As Mood points out (1973), the reanalyses by Mayeske and his colleagues "have viewed the survey information far more deeply and expertly than was possible in the limited time available to prepare the original report. Together they represent a giant step forward in understanding some of the most fundamental aspects of education in our public schools" (p.iii). The Mayeske reports were published in 1972 and 1973 and may be distinguished from the Coleman study in two main aspects: (1) The Mayeske reports study both schools and pupils respectively as unit of analysis, and (2) the Mayeske reports have used more sophisticated techniques in their analysis.

4.2.2.: Studies that followed the EEOS

Numerous researchers over the next two decades explore the effect of non school factors on achievement. In the U.S.A. The research by Jenks (1972) in *'Inequality: A Reassessment of the Effect of Family and Schooling In America'* reinforced this view as well as Thorndike in 1973 (as reviewed in Cohn, 1990). Jencks reassessed a mass of

statistical evidence from a variety of investigations, including the 'Coleman Report'. His analysis led to the rather startling conclusions that: 'equalizing the quality of high schools would reduce cognitive inequality by one per cent or less' and that 'additional school expenditures are unlikely to increase achievement, and redistributing resources will not reduce test score inequality'. At about the same time Arthur Jensen (1969 as elaborated in Monk, 1990)) reviewed the evidence on the factors that influence IQ and scholastic attainment and drew his controversial conclusion that: 'Compensatory education has been tried and it apparently has failed'.

In Britain, too, the great majority of research indicated that home background was the important determining variable. The Plowden Report (1967, as reviewed in Rutter et al., 1979)) found little relationship between outcomes and school characteristics, with the great majority of variance in attainment explicable by family background and parental attitudes. Ainsworth's (1974) follow up of the Plowden children found a remarkably high correlation of 0.8 between children's verbal reasoning scores at age 10 and age 15 at the end of compulsory schooling.

Michael Power and his team (1967) found huge differences in delinquency rates between the twenty secondary schools serving one Inner London Borough, even after excluding the schools taking the 15 per cent most academic students. These school differences remained remarkably stable over a six year period and did not appear to be explicable in terms of differences in the catchment area served (Power et al., 1967).

Dennis Gath and his research team (1977, as reviewed in Rutter et al., 1979) have produced broadly similar findings for children living in an

outer London borough of rather different social characteristics to that studied by Power. Neither of these studies had data on the children's characteristics at school entry and neither was able to determine which school features were associated with low or high delinquency rates.

David Farrington (1977) refers to an article he wrote in 1972 entitled 'Delinquency begins at home', which claimed to show that Michael Powers (1967) earlier demonstration that schools varied greatly in delinquency rates was largely a reflection of the fact that schools varied greatly in the proportions of their children who had already shown troublesome behaviour at primary schools.

David Reynolds, on the other hand, did not have any information on the children prior to secondary school entry, although there was evidence that that the schools he studied had roughly comparable intakes. He found major variations between them in rates of academic attainment, attendance, delinquency and also employment four months after leaving school. The study is important, not only because of the range of 'outcomes' studied but also because it begins to provide pointers to what sort of features may be influential in schools.

In the period following the publication of the Coleman Report, educational research was concerned mainly with identifying the characteristics of students that influence students' achievement, since the characteristics of schools reportedly did not. Such works tended to be sociological in orientation and tended to show that students from middle-class homes were more successful at each stage of education than working-class children- notably, Douglas et al. (1968), Hargreaves (1967), Lacey (1970) and Plowden (1967) (for a review on the above see Reynolds, 1976);

These were firmly rooted in the structural functionalist approach that then dominated the sociology of education. They can scarcely be termed input-output studies as such, although they may be seen in retrospect as paving the way for what was to follow. Rutter summed up this period thus: "There was a widespread pessimism about the extent that schools could have any impact on children's development and Basil Bernstein's (1970) view that 'education cannot compensate for society' was generally accepted".

Reynolds (1985, p.1) claims that a variety of factors outside the educational research discipline were influential in generating a belief in the importance of schooling. The failure of post-1960's 'social engineering' to improve either the overall quantity of educational talent or its historically unequal distribution between social classes, racial groups and sexual groupings led many to echo that call of Bernstein. The rise of neo-Marxism in the 1970's as seen in the work of Bowles and Gintis (1976) and others, popularised the 'correspondence' theory of educational system/society relationship.

What went on in the school was now simply determined by outside school factors. Bowles and Gintis claim (1976) that: 'educational inequalities are rooted in the basic institutions of our economy... (its sources are to be found) in the mutual reinforcement of class subcultures and social class biases in the operation of the school system itself'. Another set of factors influencing the adoption of this paradigm was the practical difficulty of undertaking school-based research (see the experience of Michael Power in *Tower Hamlets*).

A confusion appeared in the field of educational research that could probably be explained as such: The common assumption among social

scientists and educators that SES is always strongly related with academic achievement was not born out in the literature. Studies had found the correlation coefficient between SES and student achievement to lie anywhere from less than .100 to more than .800. Because researchers use different definitions of SES, measure student achievement in different ways, study a variety of age groups, use different types of analytical methods, use both aggregate and individual data, and conduct studies during years of varying national economic health, it is not surprising to find studies reporting such different results. Although earlier work exists, for example, Sexton (1959 as elaborated in Rutter et al., 1979), this issue gained prominence when Coleman et al. (1966) released their study. As Rutter points out:

'A careful examination of the various studies shows that when like is compared with like the results of different investigations are pretty much in agreement on the main findings. The apparent clashes in evidence arise largely because the studies have gathered different kinds of data or have used different statistical analyses to answer quite different questions.' (p.2)

To explore the degree to which using aggregated data can influence the results White et al. (1993), who reviewed all the above research, examined one set of data used twice before by researchers. They found that the aggregation of student data greatly overestimates the percentage of variance in achievement explained by SES. The magnitude of the effect of aggregation is extraordinary. Charts showing the correlation between student-level achievement and school-level SES, and between student-level achievement and student-level SES, respectively, document a gradual "flattening" of the regression line and increasing errors of estimation as variance in one or both of the measures of interest is "reintroduced" into the data. White et al. conclude (ibid. p. 342):

“Past work that concluded that SES has a dramatic impact on student achievement at the individual or school level should not be used as a basis of policy decisions involving individual students. Recommendations such as massive reorganisation of the student population based on SES would likely do very little to equalise achievement levels among schools, because SES of the individual student plays too small a role on achievement. Other assessments that say that low SES children can not learn should also be dismissed. The key to student achievement is not as simple as the income of their households.”

The great majority of these studies took as a given base that family factors were determinant and proceeded to reinforce this paradigm. Authors were able to claim school influence to be minimal even though in many cases the school was never measured or assessed (see Cooper, 1966 and Tyerman, 1968 in White et al., 1993). Even if data were not available to support exclusively family-based explanations and even if there were conflicting evidence, research studies were reported in ways that made them ‘fit’ with existing dominant paradigms.

4.3.: Educational Input-Output Research

The second body of school effectiveness research emerged in response to the suggestion that resources and other ‘material’ inputs were not very significant in explaining school outputs. It was then that some researchers studied primarily exterior school characteristics such as services and classes offered, expenditures, and the quality of instructional personnel (Murnane 1975; Summers and Wolf 1975). At the same time, more contextual characteristics, such as the concept of “significant others” (teachers and peers), were added, but again in relation to the individual (see Hauser et al, 1976).

This body of research considered education production functions, that identified “which inputs lead to more output, also considering the cost of the input” (Scheerens, 1990, p.65). Although similar to other school

effectiveness research, this research is identified by the particular orientation of the input characteristics, all of which can be expressed in quantitative or monetary terms. Their basic strategy was to gather information on the attainments of very large numbers of children using standardised tests. Variations in children's achievement on these tests were then related to available measures on the children, their homes and their schools. Clearly the results are likely to be influenced by the particular measures used, by the extent to which children or schools actually vary on these measures, and by the methods of statistical analysis employed.

A review of the results of this research led to the conclusion that, when input characteristics such as teacher salary and qualifications, teacher-pupil ratio and per pupil expenditure were considered, there was little consistent relationship between educational expenditure and pupil achievement (Hanushek, 1986). The major difficulty of this research findings is that the specific concentration on inputs and outputs shed no light on the school process that linked the two.

The review of this type of research will begin from the work done in the U.S.A. Within the New York Quality Measurement Project, Herbert Kiesling (1967 as reviewed in Scheerens, 1990) assessed input and output in varying kinds of school districts in New York. Kiesling looked at large and small, urban and rural school systems. He found significant relationships between the cognitive output measures and student-teacher ratio and expenditures for books and supplies. However, it must be stressed that the relationships were negative and that the variables had large coefficients. Kiesling reports that none of the variables was uniformly important.

The research team of Jesse Burkhead, Thomas G. Fox, and John W.

Holland(1967) (as elaborated in Cohn and Geske, 1990) conducted a study of thirty-nine Chicago schools, twenty-two Atlanta schools, and a sub-sample of 177 schools from the original Project TALENT sample. In Chicago and Atlanta, family income was positively related to reading and verbal skills respectively. Teacher experience and teacher salary, respectively were both related to positive outcomes. Using the Project TALENT sample, family income, teacher experience, and salary were significant, positive variables.

Thomas G. Fox reported on an analysis of his thirty-nine Chicago schools in a separate paper. Using two of his original output measures-reading scores and school retention rate-, he constructed a kind of a different set of school input measures, including school building utilisation rate, capacity of building by age, book expenditures, man-years of teacher and support staff time commuted to the school and to student time in specific vocational courses, and the employment status of the students. These inputs had not been researched within the school effectiveness framework to that date. While book expenditures and building capacity by age were not significant, the other variables were found to be variously positive. The research shed some new light on additional variables of potential influence. Moreover, Fox's study presents the first simultaneous equation model of educational production.

In 1970 Eric Hanushek studied a sample of 1,000 students in a single school district in California using data at the individual student level of aggregation. Hanushek compared Mexican American students with whites. He stratified the two groups into four subgroups depending on whether the student's father was in manual or non manual occupation. In terms of school factors, it is interesting to note that teacher experience and teacher education level were found not to be

significantly related to output measure (Scholastic Aptitude Test scores) for any of the groups. Since this study is the first to work at the individual student level the lack of relationship of the output to the two most commonly used school input factors must “cause a serious re-evaluation of those studies that have shown these variables to be positive and significant” (Cohn and Geske, 1990, p.180).

Martin Katzman (1968), examined data from fifty-six Boston elementary schools, including additional variables on student cultural advantage, degree of school overcrowding, attendance rate, school attrition, and size of school district. The results on overcrowding were not consistent, but economies of scale did appear in larger attendance area in terms of incremental reading ability and lessening of attrition. Teacher experience variables seemed inconclusive, although level of teachers’ degrees was generally positive.

Some interesting results were reported by Cohn in 1968 (reviewed in Cohn, 1990), obtained for a sample of 377 Iowa high schools. A significant negative relationship was found between the output measure (increment in score on the Iowa Tests of Educational Development) and two inputs: (a) the number of teachers’ college credit hours, and (2) number of discrete teaching assignments per teacher. A significant positive relation was found between output and median teacher salary.

Tuckman (1971, *ibid.*) chose a sub-sample of 1,001 senior high schools from a current population study of 10,700 elementary and secondary schools. The inputs Tuckman used were: percentage holding at least a master’s degree, education of parents, sex, race, region, and the proportion of students that were behind in grade. The outputs used were: percentage of students completing high school, percentage

continuing to any higher education, percentage attending a four year college course, percentage attending a two year college course, and percentage going on to other educational institutions. The novelty of the Tuckman study was his attempt to study the effect of interaction between school and non school variables.

Of significant contribution to this area were two studies using Pennsylvania data. One of these which used data on twelve outputs and more than fifty inputs was conducted by Cohn with Millman (1974) and Cohn (1976). The authors estimated a simultaneous equation model for fifty-three Pennsylvania High Schools (see Appendix 4.1.). The outputs were developed in conjunction with the Pennsylvania Plan, and output measures were obtained from various sources including the Coleman report, the Educational Testing Service, the Iowa and Stanford achievement tests, and other sources. Although imperfect, the list is clearly the most comprehensive yet developed, and efforts were made to obtain reliable indexes of the outputs as far as possible.

The input list includes socioeconomic variables, various school related variables (both teacher related and others), and non school environmental variables (see Appendix 4.2.). The results of these studies show that the key manipulable variables are statistically significant. For example, teaching load, increased use of paraprofessionals, or more curriculum units per grade, are generally negatively related to output. On the other hand, average teachers' salaries are positively related to output in most of the institutions. It must be noted, however, that the nature and the smallness of the sample does not allow us to draw any far reaching conclusions from the study.

The next Pennsylvania study is based on data for Philadelphia public

schools by Summers and Wolfe (1975). This study employed a longitudinal measure of output and tried to find the effect of school resources especially on various student groups - desegregated by race, sex, ability, and other variables. The study finds some school factors to be significant, including class and school size, teacher experience, and quality of degree granting institutions from which teachers graduate. It is interesting, however, that these factors do not affect all students in a like manner. The writers conclude that:

'In short, some school inputs can heighten student achievement: classes over certain sizes reduce learning; smaller elementary and senior high schools increase it. Net output may be increased by targeting teacher experience and higher rated college background to the appropriate students. Moreover, some of these school inputs can help offset the initial learning handicaps of race, income and capability (p. 14).'

An important finding of this analysis is that the student mix - both in terms of racial composition and ability levels - is likely to affect learning levels, thus implying the role of school management in identifying school mixes for increasing school gains. Summers and Wolfe (1975) suggest structuring teachers' salaries on the basis of the teachers' productive characteristics, a suggestion proposed by Cohn as well (1971a, 1973b, and 1975, pp. 293-97 as reviewed in Cohn and Geske, 1990). Then the authors compare the results obtained when the school is used as the unit of observation to results obtained when the student is used as the unit of observation. Their results show that when the students are used as the unit of observation, more school inputs are shown to be statistically significant.

Additionally, they employ the interactive model to study the differential impact of school and non-school resources on achievement, and they show that the interactive model provides more positive results than one in which no interaction terms are employed. They conclude that schools do matter, but that not every school input makes

the same contribution to output as any other and that the types of inputs that affect achievement growth of low income or minority students are not necessarily identical to those of other students. These results, if correct, could affect any attempt to improve the quality of education, especially for the disadvantaged groups.

Later studies have explored the effect of household and other individual classroom factors on student learning. A key variable in these studies is the time allocation decisions made by parents and children in the home, and by teachers and students in the classroom. Benson (1988) examined the relationships among SES, time allocation patterns, and school achievement. His findings suggest that although both high- and low- SES parents appear to be equally concerned about their children, and to allocate equal amounts of time in exercising control over them and in helping them with homework, the high-SES parents may be using their time to better effect.

Thomas, Kemmerer, and Monk (1983), however, focused on the use of time by teachers and students as an important determinant of achievement. Essentially, they hypothesised that classrooms consisting of high-SES students will be structured differently from classrooms consisting of low-SES students. They found that there were substantial differences across SES categories in the percentage of time allocated to various instructional formats - for example instruction to the entire class, small-group instruction, and tutoring. Brown and Saks (1980) also found that additional time on a subject leads to increased learning, but their results "suggest that the size of the effect is small and subject to diminishing returns" (p. 319).

The study by Thomas and his associates (1983) points out the importance of using the classroom and the individual student as the

units of analysis in school productivity research. Without question there may be considerable differences in learning environments across classrooms in the same school, or across students in the same classroom. Harnischfeger and Wiley (1979) find that students in different classrooms, to which an equal amount of resources have been allocated, may not receive the same opportunity to learn, and that all students in the same classroom do not receive equal amounts of instructional resources. So, the organisational characteristics of the classroom and the instructional strategies utilised are influential to the magnitude and distribution of learning opportunities. Brown and Saks (1980) argue that the degree of inequality present in a given classroom is likely to increase as the level of classroom resources becomes more constrained.

4.4.: School Effectiveness Research

4.4.1.: Introduction

A new body of research on school effectiveness has emerged since the mid-1970's which challenges the basic contention that schools can do little to influence student academic achievement. This new research on school effectiveness has been conducted primarily by scholars and researchers, often associated with colleges of education, who did not embrace the educational production function approach. The intellectual policy climate within which school differences work has grown up, has not been conducive to its rapid popularity or growth. Interestingly, whilst American research in the area grew very rapidly in the early and mid-1970s's, it was not until the late 1970's that results of comparable British work began to appear. The reanalysis of the Coleman data suggesting large school effects on some outcomes (see

the review in Reynolds, 1985), the appearance of the IEA studies showing substantial system effects and the publicity in British literature given to some of the early American school differences research certainly begun to prepare the way for a change in intellectual climate as regards the power of the school.

The research on school effectiveness is characterised by naturalistic inquiries involving in-depth case studies of a few individual exemplary schools. These studies usually provide very elaborate and detailed descriptions of a school's climate, its organisational features and classroom procedures, and the instructional strategies and practices employed.

This type of research often employs direct classroom observation techniques in an attempt to capture the dynamic and developmental interaction which occurs between the teacher and the learner. The basic research strategy in these studies is first to identify 'effective schools', that is, schools that are successful beyond expectation in terms of standardised test scores, and then to describe those school characteristics which are associated with this high student achievement. A comparative case study approach, usually in a matched-pair design, is often used to investigate those characteristics which appear to differentiate more effective schools from less effective schools based on some criterion of academic achievement.

The literature on school effectiveness suggests that effective schools consistently exhibit certain essential elements or characteristics. Early summaries of this enormous research by Edmonds (1982) identified the following five characteristics of an effective school:

- (1) strong leadership on the part of the principal, particularly with regard to

- instructional quality;
- (2) an agreement on instructional goals with an emphasis on basic skills;
- (3) a safe and orderly climate conducive to teaching and learning;
- (4) high expectations on the part of teachers for all students; and
- (5) the systematic evaluation of student academic performance.

Subsequent studies have also stressed the effective use of classroom time and increased time-on-task as another basic ingredient of an effective school.

In a comprehensive review and synthesis of the school effectiveness literature, Mackenzie (1983) developed three broad dimensions of school effectiveness, school leadership, efficacy, and efficiency. Mackenzie presents an image of an effective school based on these three dimensions and a total of thirty-one specific core and facilitating elements drawn from the school effectiveness literature.

Purkey and Smith (1983) also conducted a comprehensive and critical review of the research on effective schools by dividing the literature into the following four types of studies: outlier studies, case studies, programme evaluation studies, and “other” studies. Based on their analysis of these various studies they describe the components of an effective school using two groups of variables. The first group is composed of organisational and structural variables, while the second group consists of process variables.

The nine organisational/structural variables identified by Purkey and Smith as being characteristic of effective schools appear in Appendix 4.3. The four process variables related to the culture and climate within the effective school are listed in Appendix 4.4.

Purkey and Smith emphasised that the organisation/structural and process variables are interrelated and interdependent. The first group

of variables provide a framework within which process variables can be developed. Neither group of variables, in itself, is sufficient to describe an effective school.

A review of the most recent research always provides some insight into the complexities involved in understanding school effectiveness. Such could be the relationship between effectiveness and improvement of schools. A strategy for school improvement is similar to modern approaches to school improvement in many parts of the world and is one that encourages high levels of input at the local level. In detail Hocomb (1991 in Reynolds, 1994) identified a series of activities that could be considered as developing an effective school improvement process. They included the factors which relate to the list in Appendix 4.5.

The review of the research on school effectiveness made by Professor Michael Rutter and his colleagues in his influential -especially in Great Britain- 'Fifteen Thousand Hours' (1979) is detailed and contains both American and British studies in the field. Before organising these early studies he comments:

'Because very few of the studies provide statistical links between school measures and the children's performance it is rarely possible to conclude with any confidence that the school variables are directly related to children's performance but the investigations provide valuable leads on what might be important.' (p. 10)

He considered the previous work in this area under seven broad headings which are worth mentioning:

1. Amount of teaching experienced by children.
2. The size of school.
3. Organisation of teaching groups.
4. The effects on pupils of differing teacher expectations.
5. Teaching styles and classroom management.
6. Patterns of discipline.

7. Overall school climate.

The major school effectiveness studies in the U.K will be reviewed below.

4.4.2.: The major studies in the U.K.

Rutter's much cited (1979) study arose out of previous investigations by him and his colleagues comparing 10-year-old children in an inner London borough and in the Isle of Wight (off the south coast of England), which showed:

- (a) emotional, behavioural and reading problems were positively correlated and were twice as common in Inner London as on the Isle of Wight, and
- (b) the children's problems were strongly linked with family adversity (Rutter et al,1975c).

This fact makes it clear how Professor Rutter, a child psychiatrist, became so interested in educational problems. Rutter report (1979) has been the subject of extensive discussion. Its main conclusions are summarised in Appendix 4.6.

Rutter et al. concluded by suggesting that they had found a causal relationship between school process and children's progress, and by suggesting that in this respect they had been able to go further than previous studies had.

In the case of the Rutter research project two conferences had taken place to discuss its results within 12 months of its publication (Tizard et al., 1980). The proceedings were published separately and each includes a series of short essays - nineteen in all in the two

publications, mainly focusing on methodological, statistical or other points arising out of the Rutter research.

Both these publications include many positive comments, recognising that the Rutter research represented a research which broke new ground with many interesting possibilities, and noting the 'enthusiastic' reception that it had received within the education service. Regrets and/or criticisms included the focus on quantitative data with the consequent neglect of qualitative evidence, the inclusion of only 12 schools, the concentration solely on inner London, the omission of the school curriculum, the need for more specific understanding of what is meant by ethos, the need for more linkage with different teaching styles and the 'almost exclusive' concentration on a managerial approach, the omission of the aims of classroom teachers, the omission of any historical perspective, limitations on the list of behavioural variables, the defects of using a correlational model, inadequacies of adjustments in intake differences, the limited nature of the 'outcome' variables used, and the 'very rum collection' of 46 process variables (Tizard, 1980).

The Rutter report, published in 1979, may be said to have been the start of serious interest in effective school research in the U.K. and it provided the stimulus for other research work in this field. Firstly, Gray et al. (1983) published the results of a large scale survey of some 20,000 former pupils at most of Scotland's secondary schools. It included such measures as "truancy" (the percentage of pupils who admitted being persistent truants from school), "satisfaction" (the percentage of pupils who assessed their last year in school as being "worthwhile"), "belting" (the percentage of pupils who were often belted) and "O-grades" (success in external examinations). It also included five separate measures of "intake" (including percentage of

school-leavers with middle-class fathers). The authors described their approach as “illustrative and exploratory” and commented: ‘ We do not pretend that we have reached final and definitive answers’.

The next work by Steedman (1983) was produced for the National Children’s Bureau. It was an analysis of longitudinal data collected by the National Child Development Study and based on the lives of some 4400 pupils; this study was largely confined to the selective versus non-selective schools controversy, an emotive issue which regrettably, from the point of neutral and objective research, has been the aspect of such work which has received the most extensive media coverage. Steedman concluded that the task to describe progress in comprehensive and selective schools to the limited extent that progress can be judged with examination results, was almost impossible.

Marks et al. (1983) analysed the external examination results from 2100 schools in 57 LEAs and related these to social class composition of the LEA. As with Steedman, the main objective was to pursue the controversy over selective versus non-selective schools in terms of their respective examination results. Marks’ research was subsequently subjected to considerable criticism, not least by Gray and Jones (1983). A particular point at issue was that Marks related statistics of socio-economic ‘disadvantage’ to educational ‘success’, which led Gray and Jones to comment: ‘It goes without saying that levels of disadvantage in an LEA are by no means always the mirror-image of levels of advantage’. According to one report, the Department of Education and Science (DES) was critical of the Marks approach, particularly with regard to their measures of social class which were seen as inadequate (Goldstein, 1983). More criticisms followed in the educational press (Venning, 1983; Berliner, 1983).

The DES itself became interested in such work and statisticians sought to relate at LEA level, inter alia, levels of educational expenditure to the external examination results achieved. The results showed that whereas social background provided a statistically significant explanation of variation in the levels of examination successes of school-leavers, school-based variables, including the expenditure variables, did so only to a much lesser degree. These included variables representing teaching and non-teaching expenditure, teacher turnover and pupil grammar school attendance (DES, 1983).

The work by Wilby (1983) should be mentioned here. He gave each LEA an 'input' score based on six measures of educational and social handicap, including socio-economic status, overseas origin of head of household, large families, overcrowding in home and free school meals. This was then compared with the output of each LEA, as measured by the proportion of school leavers passing respectively, one or more A-levels, five or more O-levels and no external examinations, to assess the 'value added to or substructed from' their children by LEAs. This in turn was related to the average per pupil unit costs for each LEA and analysed. Aware of the many difficulties arising from such a simplistic approach, Wilby felt able to conclude: 'on average high spending does get better results'.

These first post-Rutter studies were conducted at the level of inter-LEA comparisons, not at that of individual schools. A review of these studies can be found in Reynolds (1994). It was after 1986, when the results of the Loughborough based research by Hough and Warburton were published, that studies were published regarding inter-school comparisons of an input-output nature within the area of one LEA. A number of writers including Goldstein, (1983) have called attention to

the fact that research at the LEA-level may conceal wide divergencies at the level of individual schools and have urged the need for studies to be carried out at individual school level, thus permitting inter-school comparisons.

Hough and Warburton (1986) extended their work on school costs and resources and related, within one LEA, data on level of expenditure per pupil in each secondary school to statistics of external examination successes, especially at O-level. At the same time, data derived from the National Census of 1981 became available for this county. The cost data used related to the total recurrent expenditure per pupil in each school for each of three financial years. These, therefore, included all recurrent expenditure in these schools and were not limited to the classes taking GCE and CSE examinations. Capital expenditures were included. With regard to any possible causal mechanism or linkage between unit expenditure per school and O-level successes, the regression results are confusing and no meaningful conclusions can be drawn from this research regarding linkage between expenditure per pupil and external examination success at the level of individual school.

In the light and under the progressive implementation of the Education Reform Act 1988, it is obvious that an economic approach is currently much in vogue in the U.K. The publication of the two latest U.K. studies is within this framework. We shall consider these in turn.

Mortimore et al. (1989) aims to answer three main, interrelated, questions in relation to primary schools:

- (1) Does the particular school attended by the child make difference?
- (2) Will a child's progress in reading or writing be similar wherever he or she is taught?

(3) Are some schools more effective than others?

To investigate these questions Mortimore and his team assembled data relating to 2000 pupils over their four years (from ages 7 to 11) in 50 randomly selected LEA primary schools in inner London. School size varied from 73 to 519; average class size was 25. The data comprised of a variety of measures which appear in Appendix 4.7.:

The main findings of this study were that the individual school did have a significant effect on children's attainment. However, only five schools were successful in achieving significant positive effects in respect of all the various cognitive outcomes tested (only two schools in the case of non-cognitive outcomes).

The twelve key factors for school effectiveness were then perceived. Along these lines the eleven factors for effective schools were developed and were listed by Professor Peter Mortimore in his inaugural lecture on the 7th of February 1995 (p.11):

1. Professional Leadership
2. Shared vision and goals
3. A learning environment
4. Concentration on teaching and learning
5. Purposeful teaching
6. High expectations
7. Positive reinforcement
8. Monitoring progress
9. Pupil rights and responsibilities
10. Home school partnership
11. A learning organisation

Little is said by the Mortimore team, however, regarding the research methods used to elicit the above complex conclusions from the data assembled. The researchers made extensive use of analysis of variance. They also give some correlation coefficients, but no regression

equations. The key factors for school effectiveness are not given arranged in any order of importance. Mortimore and his team state that they aim to write in a 'non-technical way' but it is not very clear why they went so far in that direction.

Smith and Tomlinson (1989) studied some 3000 children in 20 multi-racial comprehensive schools in four LEAs (not named), the schools having racial minority children varying from 12% to 89% of the school's population; the children studied transferred to secondary school in the autumn of 1981 and were followed through to the end of their fifth year (after which many of them left school). The data assembled during this period comprised, for each child, the results of attainment tests in mathematics, English comprehension, writing, verbal reasoning, and numerical reasoning, number of half-day absences each year, third year option choices, and indicators of behaviour problems (via questionnaires from teachers); pupils completed questionnaires relating to encouragement/ discouragement from teachers, enthusiasm for school, participation in various school activities, friendship patterns, aspirations, and language spoken at home; parents were surveyed regarding their ethnic and socioeconomic group, whether the parents were working, whether one or two parents in the household, extent of their contact with school, their assessments of children's progress, and their criticisms/ praise of aspects of school life; teachers were asked to complete further questionnaires and informal interviews took place with some school staff.

Responses to some teacher questionnaires are described as 'poor and uneven' probably because many teachers were anxious about the research. Many teachers were also not very keen on the questionnaire to parents, which invited parents to set down in writing their criticisms of the school.

Despite such problems, Smith and Tomlinson (1989) found large differences in the effects of schools. They found very important differences between individual schools in terms of the pupils' levels of achievement in English and in mathematics, with such levels of achievement being 'radically higher' in some schools than others. The authors conclude that such school effects are far more important than differences in attainment between black and white children and they end the book by saying:

' The most important implication of the findings of this research project is that action is needed to improve standards of all children in the poorer schools. The measures that will most help the racial minorities are the same as those that will raise the standards of secondary education generally'.

Smith and Tomlinson include many more, and more detailed tables than do Mortimore et al. and also give much more coverage of the statistical techniques used. They included multiple regression analysis and also 'variance components analysis', a method developed by the Department of Applied Statistics at the University of Lancaster, which makes use, within the classical ordinary regression framework, of analysis of covariance, school effects being considered as random variables and related as model residuals. Both the treatment of the data and the results are complex but are clearly set out in the text and the accompanying statistical tables.

These two books represent major contributions to educational work of this kind in the U.K.. Both relate to successful, large-scale, and costly research projects. Both stress the importance of the individual school (and Mortimore et al,1989) also includes comparisons between different school classes). As already mentioned, the respective authors wrote their research results in different ways.

The recent Scottish data of a research project used by Cuttance (in Reynolds, 1994) suggest that up to 8% of the variance in the pupils' examination attainments is school-related and that the difference between the 'most effective quarter' and 'least effective quarter' of schools is of the order of two of the old O-level grades.

Perhaps the major contribution made by British researchers to the debate on school effectiveness has been the development of the 'value added' distinction to the literature (Rutter et al., 1979; Mortimore et al 1989). Instead of concentrating solely on school outcomes, which is a feature of the American research, it became an accepted position for British researchers to collect input data to establish the gains that students made during their time at school, rather than simply to identify where they were when they finished. This created the dilemma of what is the most appropriate method to measure school effectiveness, from the outcome point of view adopted by the Americans or from the 'value added' point of view adopted by the British.

A criticism that can be labelled at this third body of research, however, is that it has tended to produce lists of 'ingredients' of characteristics of effective schooling, typically involving some combination of: strong academic leadership; a safe and orderly school climate; an emphasis on basic academic skills; high teacher expectations for all students; and a system for monitoring and assessing student performance. It is now widely held that such lists of characteristics are too simplistic in their suggestion that their adoption would work in all schools. 'The school effectiveness movement' adopted such lists and applied them as 'recipes' intended to ensure school effectiveness in a wide range of different environments.

Another cautionary note that should be applied to an assessment of this body of research, relates to its use of narrow definitions and measurements of effectiveness. Most of these studies have concentrated on academic achievement as the main indicator of school effectiveness. Furthermore they have tended to measure school effectiveness by reference to standardised achievement tests which were presumed to measure the attainment of the school's academic goals.

It is clear that a broader understanding of the objectives or goals of schooling is to be preferred. This is in line with more recent work as the one by Mortimore et al. (1992). This study contributed a lot to our understanding of school effectiveness in highlighting the importance of considering input variations among pupils when measuring effectiveness, the need for a variety of outcomes when considering the nature of effectiveness, as well as confirming the need to consider processes. Other similar work in the field by the team of H. Goldstein at the University of London, Institute of Education, showed that the levels of aggregation of the data should be taken into consideration and proved the need for multi-level statistical techniques. All this school effectiveness research finally turned towards the improvement of schooling and showed the necessity to understand the culture of the school when attempting to implement change designed to improve the effectiveness of schooling.

4.5.: Instructional School Effectiveness - Some Theoretical Issues - The movement Towards School Improvement

The final area of research considered issues of instructional effectiveness (Scheerens, 1990, p. 68), which was characterised by the

attention paid to the work of individual teachers or to activities in the classroom or school at an organisation level. From this research as well, a series of characteristics have been identified which are consistently associated with school outcomes . A review by Scheerens (1990) indicates a wide-ranging body of research that has been undertaken in the search to establish how schools affect pupil achievement and other outcomes.

Apart from this type of work, researchers, at this phase of the school effectiveness research, identified and elaborated on many questions about school effectiveness that remained unresolved in the previous work and revised in a critical way the work undertaken up to then.

As Rosenholtz (1985) comments on the theoretical nature of such questions saying that the most interesting questions in this area are not methodological, they are conceptual. In her theoretically guided study Rosenholtz admits that the research up to then had failed to provide us with means to understand fully the complex interplay of factors and the means whereby effectiveness may be enhanced. In an attempt to redress this weakness in the school effectiveness literature she offers an analysis of the ways such variables may combine and interact. Drawing a distinction between schools that are changing ('moving schools') and those that are not, she has been able to illuminate the ways in which variables interact so as to provide an environment conducive to learning.

She concludes that the success of any strategy for enhancing student performance depends largely on the context in which schooling occurs, an inherent part of which, she claims, involves the empowerment of people at the school site. From her perspective this necessitates a 'bottom up' approach so that the energy driving the processes of change

emanates from the active engagement of agents at the school rather than being transmitted from bureaucrats at the top.

One of the key areas that has been pursued in great elaboration by researchers lately relates to how school effectiveness is defined. Many definitions have been proposed but none have found universal acceptance. Chapman (1992) identified school effectiveness as one of what Gaillie in 1964 called 'essentially contested concepts'. Since there will be a number of different perspectives of the goals of education in general, and of the role the school plays in the fulfilment of those goals then, necessarily, the perspectives of what makes a school effective will vary as well.

This is a critical argument, because it provides some measure of understanding for the direction the debate has taken so far. Most of the research until now has been conducted with the researcher holding a particular view of what constitutes an effective school. This view has, in some cases structured the parameters of the research. To many in the United States and Canada, an effective school is one whose students perform well on standardised tests. As such, the identification of more effective schools could be made by reviewing statewide or national test scores.

Those in the United Kingdom were, until recently, more concerned about the rate of improvement shown by students in the school and understanding the nature of the relationship between school process variables and content variables and the individual child's performance. In this situation, effective schools could not be identified without going into the school itself. In Australia, there had been a great deal of debate and a reluctance to offer any definition of what constitutes an effective school until 1991, when the Australian Effective Schools

Project (1991) defined an effective school as 'one that achieves greater student learning that might have been predicted from the context in which it (the school) works' (McGaw et al. 1992). In each case, the definition of what an effective school is becomes critical to any other questions that might be asked.

The Organisation for Economic Co-operation and Development (OECD) has been involved in supporting an international programme of research into school quality and school effectiveness for the past decade. Work has been conducted in areas such as resource deployment and management, schools and quality, the relationship between school improvement and decentralisation, and the effectiveness of schooling and of educational resource management (Chapman, 1991). These international perspectives have demonstrated clearly how complex the issue of school effectiveness is, and how interrelated the concept is to others such as school management, school improvement and school quality.

The OECD Directorate for Social Affairs, Manpower and Education, in a recent report (Chapman, 1991), provided some insight into the broad spectrum of educational debate that school effectiveness encompasses. In the first instance, it raised some questions related to the difficulties in providing a definition of effective schools:

'The concept of 'effectiveness' is central to the management of schools and school systems; nevertheless as yet there exists no uniform definition of an 'effective school'. Definitions vary depending on the orientation or theory of those examining the issue.'

(Chapman, 1991, p. 7)

The report which considers the effectiveness of schooling and educational resource management, also comments upon the limited range of parameters that have been researched, as outlined in the

following paragraph:

' Given the extensive range of school objectives the difficulty of studying school effectiveness becomes clear. For the complexity of these objectives... will not be capable of rational enquiry. Much research into questions of school effectiveness has tended, for this reason, to concentrate on a select number of objectives and only on those that can be stated in measurable terms.'

(Chapman, 1991, p. 8)

In this last 'section' of school effectiveness research the effect that schools have on the achievement of their pupils is increasingly becoming not only an issue considered by researchers, but one guiding educational policy-making at systemic levels and administrative practice in schools. Chapman (1991, p. 5) identified a series of events and situations that occurred during the past three decades which seems to have left a legacy for both educational policy-makers and the managers of schools as we move through the 1990s.

All interested bodies followed the development of 'the school effectiveness debate' and especially the most recent development on 'school effectiveness towards school improvement' (see Stoll, L. and Mortimore, P., 1995 and Fullan, M., 1995).

Within this framework it could be argued that much of what has emerged from the public debate level in the past seems to have had little effect on what actually happens in the classroom and more needs to be done if we want problematic schools to improve. There is, however a second level of debate which occurs in the school itself. Here, teachers, principals and, sometimes, parents have tried to improve the level of effectiveness in their own classroom or school. At this level, changes in the education of children were continuous and substantial.

Based on a theoretical approach that views organisations from a technical/ rational perspective, this last type of effective school research focuses on the structures and processes within the school that appear to be related to the types of outcomes that are produced. From a policy-making perspective, the focus on the school as a unit of change has become politically important. Schools therefore, are the organisational level at which educational activities are integrated and, because of this, are appropriate targets of educational reform. School personnel are being impelled to change the status quo in various ways with the expectation that the changes will somehow improve student performance.

Earlier effective schools research focused on correlates of effective schools that were associated with high achieving, typically urban, schools. Much less has been learned from these studies about how the school's surrounding context may mediate this in-school process to produce, or improve outcomes.

Recent methodological advances focusing on multi variate techniques have allowed advances in the unravelling of the effects of different sets of variables including demographic composition, school organisation and school effects on achievement outcomes. What has been established is that characteristics of the school and its social composition (e.g. student backgrounds, community factors, parent education and involvement) affect both directly and indirectly the types of activities undertaken in school classrooms, as well as the types of outcomes produced.

Scheerens (1990) reviews the main findings as such: contextual conditions appear to affect students' classroom learning experiences ,

teaching practices, teacher attitudes about curriculum and students , and resource allocation. Of course, in-school variables such as principal leadership and characteristics of the teaching staff influence the work structure of the school and, hence, the results produced are also related to how the school is organised instructionally and the environment in which this instructional work is conducted .

4.6.: Implications

Early effective schools research suggested that schools could overcome the barrier of their students socio-economic status by implementing the 'effective schools formula' (Edmonds, 1979). In a second phase of effective schools research, these early studies were disputed by researchers, who argued that although no one knows how to create an effective school, the influences of the home and community should not be discounted, since they do in fact 'shape the means by which schools become effective'.

Clear policy recommendations, however, have not followed from the search for an effective schools production function over the past two decades (Monk, 1990). While school-based reform efforts attempt to capitalise on the specific information available at the school level to improve performance, officials publicly responsible for overseeing education must be careful to maintain their public accountability.

In a sense, this leaves policy makers in a dilemma: to grant greater freedom to schools and teachers in their classrooms to choose their own directions and simply monitor the results, and to conceive of good administration as simply getting out of the way of the teachers, is to pursue policies at whose core is a fundamental denial of the education

production function (Monk, 1992). On the other hand, to limit teacher classroom autonomy and to use practices that have been only partially or incompletely, supported by existing research to exercise tighter control over schools through, for example, resource allocation policies, standardising curricular policies and setting uniform standards of accountability is to put faith in the existence of a production function that to date has been inconsistent across contextual settings.

In the countries that most of the research on effective schools has been carried out, the educational authorities appeared to have used school effectiveness research to justify the decisions currently being made about the structures of education. However, there appears to be similarity in these decisions from country to country. There seems to be a trend towards centralised control over some areas such as the development and measurement of school goals, but with increasing responsibility at the school level for structuring learning activities to achieve these goals. Chapman pointed out that:

‘ Some countries with a tradition of decentralised arrangements seem to have moved towards more centralised control over functions; in other countries where there has been the tradition of more centralised approach the opposite seems to be the case.

(Chapman, 1991, p. 6)

She also pointed out that in some countries shifts in decision-making to schools seem to be happening simultaneously with increases in centralised decision-making powers and influence. The new British educational reforms are a case in point. At the same time as the national curriculum with national testing and reporting was prescribed, control in school budgets was being devoted to the school. Similar movements towards a national curriculum, but local control by schools, is also evident in Australia. Yet, in many respects, the use of the term school effectiveness is comparatively recent.

Taking into consideration that even the most recent American research is still outcome oriented, a further dilemma for the study of school effectiveness occurs. The phrase 'school effectiveness' has become value laden and has been narrowly interpreted by some as meaning 'test oriented'. The decision in England and Wales to publish the aggregated performance in national tests of students at age 7, 11 and 14 has been widely criticised by teacher and parent organisations because no attempt has been made to allow for a host of sociological factors such as differences in the availability of preschool education, the lack of quality staff in many inner-city schools, family circumstances, the situation of schools with a high percentage of students for whom English was not the mother tongue and the like.

The first full league tables, published in 1992 were of the attainments in the GCSE examinations taken at year 11: they were plagued by inaccuracies and misrepresented school performance particularly where able pupils took some subjects a year early. There was widespread criticism of the inadequate trailing of government tests, to the extent that in 1993 three teacher unions representing 80% of the teaching force in England and Wales balloted their members to boycott some or all of the tests. There are fears that the government will replace the GCSE examinations - offered in a far wider range of subjects than those of the National curriculum - by SATs (standardised achievement tests).

Yet it would be inaccurate to judge that some countries in the world are not interested in making their schools more effective because they refuse to call their efforts 'school effectiveness'. Effectiveness in this sense may be one element of a wider goal such as the excellent school. Much of the Australian and the Canadian literature has identified more

with the process orientation associated with school improvement than with the product orientation of the early school effectiveness research. Part of the dilemma is to identify the relationship between school effectiveness and school improvement, and the other part is to make sure that the concepts are not used interchangeably.

There needs to be a very clear distinction made between the 'school effectiveness movement' which emanated in the United States, and the universal and long-term aim of making schools more effective. The former has been interpreted as assuming a narrow, quantitative orientation, the latter makes no such assumptions. This has created a further conceptual dilemma which relates to separating the concept of school effectiveness to the measurement of it. There appears to have been very little attempt in the past to make that distinction.

While the political rhetoric for reforming schools continues to increase (e.g. national assessments, principal and teacher accountability for outcomes, choice, site-based management), the technical ability to implement and assess the impact of many of these proposed interventions still lag behind (Shavelson et al., 1989). It is clear that ultimately school outcomes result from a variety of organisational processes - some of them related to the efforts of individuals such as principals and teachers, and others resulting from the interconnected nature of the school with its contextual environment.

Some of these latter variables that are important to understand more closely include how schools make use of time, what they emphasise in terms of curriculum, how they group, or track students, the type of support they have available for student and parent involvement (Oakes, 1989). These practices reflect the equality of access students have, to

knowledge in the school. Similarly, the culture of the school also affects the day-to-day school experiences that children receive, as well as variables associated with the staff's expertise and commitment to teaching (Oakes, 1989). As Rumberger and Wilms (1992) suggest, a remaining research need is to see whether policy changes in the school's context and indicator systems, such as press for achievement, can produce changes in outcome over time.

Educational psychologists could, of course point out that human development and learning can not be measured directly, but can only be inferred from a change in performance over time. This performance can be very complex in the process of socialisation over time. This is another serious problem that the research in this area faces but, as Cohn (1990) points out:

' The solution is neither as simplistic as many would have hoped nor as insoluble as others would suggest. The answer lies not in giving up promising lines of research, but rather in refining measures of cognitive ability, finding ways to measure non-cognitive functioning more adequately, better data collection, and more sophisticated data manipulation and analysis. What is needed is the willingness to take small and tentative steps, to consolidate knowledge of past successes and failures, and to continually adapt both the instruments and the processes.

(Cohn, 1990:196)

4.7.: Cost Effectiveness Analysis in Practice

Having reviewed the literature on school effectiveness we drew the framework of the empirical work undertaken within the educational production framework which is the one of this study. In this section we shall examine the cost-effectiveness analysis (from here on referred to as C-E analysis) in practice, that is the applications of this analysis in education. We shall critically assess H. Thomas's: 'Education costs and performance' as this was rather influential to this study. This section will centre upon the work of Thomas and the ways he applied

the cost-effectiveness analysis to the school A-level curriculum.

The applications of C-E analysis to education are not too many nor can they easily be distinguished from the other work in the field of school effectiveness. H. Thomas (1990) carried out a search in order to locate the cost-effectiveness studies on non-vocational provision as the cost-effectiveness studies of vocational training were examined by Drake (1982). He admits that the results of that research were modest and parallel to the results of Smith and Smith's in 1985 search for published cost-effectiveness studies and subsequent survey of state level uses of cost analysis. Smith and Smith as well as Thomas found that many articles had misleading titles and did not actually deal with cost-effectiveness analysis. In the Smith and Smith's survey the results showed that in the twenty-nine state departments, a grand total of ten cost-effectiveness studies had been conducted in the five years up to 1983.

Levin's (1983), 'Cost-effectiveness: A primer' outlines the basic techniques of C-E analysis and provides an insight to the application of those techniques to education. More specifically, he presents a C-E analysis of computer assisted instruction, an application that was carried out in detail a few years later along with colleagues (Levin, Glass and Meister, 1987). Drake (1982) provided a survey of C-E techniques to vocational education projects in the U.K.; this survey is very important for its critical review of the methodology employed in various studies and the recommendations it makes for future work in the field.

There were some earlier efforts in the field, however. Riew (1981) employs a 'cost-efficiency' analysis to consider the effects of enrolment decline and the subsequent reorganisation of schools.

Webster (1976) had used cost-effectiveness techniques in a similar area concerning decisions about expansion, elimination or retention of school programmes. Taylor and White (1991) used C-E techniques extensively in a large survey in Australian schools concerning the analysis of multi-media and mixed mode teaching and learning.

There was an earlier attempt by Thomas (1981) to apply C-E techniques to providing comparisons of A-level provision in different institutions. This study was published by the then Department of Education and Science and indicated that sixth forms of less than 140 students were inefficient given the scarce resources within education. This implied that institutions with sixth forms below a 140 students should consider pooling resources in order to provide a more efficient service. Thomas points out that the size of the teaching group is not a measure of efficiency, but merely a process variable and that an economic analysis of the sixth form would relate the costs of provision to measures of output, which are measures of efficiency

This study of Thomas compares the teaching of Economics A-level classes across four institutions using a cost performance ratio and an academic performance ratio. It can be considered quite limited in scope. As Simkins (1987) comments the study does not link the value added scores to produce a real cost-effectiveness ratio. However, the study throws light on issues regarding the cost of the provision of A-level courses, mainly the opportunity cost of students and the problems associated with the collection of data required for the study. It may be unfortunate that the study does not discuss the implications of the results from a policy maker's standpoint. Thomas's 1981 framework was used by Reeson (1987) to carry out a similar study about the cost-effectiveness of A-level teaching across four education authorities. As with the Thomas study, A-level results were used as the sole output

measure.

In his study 'Education costs and performance' (1990) Thomas develops the 1981 analysis and uses a larger sample. Data is collected over the period 1980 to 1982 concerning 1160 A-level students across 12 institutions. The level of analysis is far more detailed than the 1981 study, the C-E analysis is done at three levels and the whole analysis is prefaced by a thorough theoretical treatment of costs, efficiency and effectiveness.

In the chapters on theory methodology we consider these aspects of C-E analysis. We must, however make some important points regarding Thomas's treatment of costs. The chapter on costs is the most theoretical in his study and his major concern is 'opportunity cost'. He makes a journey through the literature of welfare economics and indifference theory having as a main area of debate the one between costs as commodities and costs as utilities. The outcome of this theoretical speculation is apparent, anyway: the vast majority of collected data will reflect costs as commodities as opposed to subjective utility values.

However, this deep investigation of costs provides the research grid that was used by Thomas to organise his research questions. He gives four classifications of costs: costs as subjective, costs as commodities, costs as utility and costs as opportunity. The rest of the research matrix is formed by the different perspectives of effectiveness he recognises. these are: Input-output, organisational and institutional. The matrix appears in Appendix 4.8.:

The first seven research questions of Thomas (1990) reflect the input-output tradition of research applied to data collected at the level of

the classroom. These are a third of his research questions and an important part of his research design. They are shown in Appendix 4.9.:

Thomas raises some reservations concerning input-output analysis but is not as critical of this area of research as one might expect. In a way, he falls into the trap of considering the educational process as 'a black box' as he makes no reference to the need for a link between inputs and outputs to be included in the analysis. The absence of a learning model for A-level students is obvious, though, the selection of his research questions is a rational one.

This group of questions relate to the qualities of teachers that influence the C-E ratio through their impact on the learner. One, however, would expect a different approach since Thomas claims that the research is being undertaken at the micro-classroom level. However he does not analyse the learning process in terms of methods of teaching, management of resources and use of time. Thomas also omits any measure of the school ethos and climate that might affect the learning process at this micro-level.

Thomas stated that his own experiences as a teacher were decisive in his belief that the teacher does make a difference to learning outcomes. The teacher has an amount of resources at his or her disposal which are also likely to have an impact. Thomas makes use of capitation figures, but dismisses them as insignificant. A combination of teacher characteristics with resource allocation patterns within classrooms would probably offer a lot to the analysis.

The length of experience and qualifications are analysed as probably correlating with student performance. In his analysis there are no comments on the interaction between these variables with reference to

their measures. It is obvious that Thomas selected measures on which there is likely to be available data. But does the data always pinpoint the information that is really relevant to the analysis? For example, no investigation is made on the relevance of teachers' qualifications and experience to the specific subject and syllabus.

Thomas does not comment on the significance of past results in these areas that might have influenced him in his choice of questions. He does mention remarks by Simkins (1987) concerning the problems and the doubtful results of input-output studies at the macro-level which do not give us information about activity in the classroom level.

Although Thomas claims that his data and observations are made at classroom level, this does not put his study at the level of micro-observation. His reference to the work of Cuttance (1985) which sees school systems as nested layers with each level of activity being influenced by the level above seems to lead him on to consider effectiveness from an organisational point of view. This is what makes us believe that the organisational perspective will counteract any shortcomings of not performing a more micro-level analysis. No such analysis can be carried out without any reference to the impact of the process variables and their interaction in the learning process.

Research questions from 8 to 12 represent the organisational perspectives of the study (see Appendix 4.9.)

With respect to question 8 which inquires into the C-E of the different subjects, Thomas makes a grouping of the subjects taught at this level which is quite common, and looks at the deviations in A-level grade advantage given by certain subjects. It is strange, however that no data

is provided at the classroom level relating to subject costs. There are likely to be differences across examination syllabi and the Thomas study gives no indication concerning the variety of syllabi taught in the schools surveyed.

Thomas sees costs from the different perspectives of individual, institutional and social and this raises additional questions regarding subject costs. There are certain courses that impose additional costs onto students and their families like those involving fieldwork or the purchase of specialist equipment. In these cases an additional investigation of the results might have brought out interesting material. However, these issues are not investigated by Thomas.

Although, in question 9, Thomas asks for the allocation of timetabled resources for each subject in every institution, no allowance is made for the support these institutions give their students, like, for example, the provision of study skills sessions. This issue is related to the use of time these institution make which, inevitably would affect their outcomes (see the review of the literature on effective schools).

Question 12 relates closely to the main research question of the study and raises issues about the whole functioning of an organisation. Thomas wants to examine the case that teaching in the sixth forms, where it is directed towards A-level, and teachers are chosen to be specialised, could be more cost-effective. When dealing with sixth forms the consideration for an analysis of the whole institution is stronger, however. The effective school literature (Rutter et al., 1979; Mortimore et al, 1989; Reynolds, 1994) deals with the ethos, climate and operations of the whole institution and rarely considers the sixth form as a sub-unit. However, how the sixth form is viewed as a component of the institution and how it is resourced will be very

important in determining the success of the students.

The above mentioned and even more effective school literature (Brewer, 1993) constantly refers to the principal's role in determining the ethos and effectiveness of the school. It is obvious that the head teacher could be extremely influential in some institutions regarding staffing resourcing and selection procedures an issue that should be investigated in a C-E analysis.

The third category of research questions deal with costs and benefits as viewed from different perspectives of the student the institution and society. They are written in Appendix 4.9.:

With respect to question 13, two crucial issues are raised in Thomas's study. The first is that of earnings forgone to be incorporated into a measure of individual cost-effectiveness. The second issue concerns private costs. As far as the first issue is concerned, Thomas makes a detailed work and includes an investigation of the local labour markets and interviews with employment and careers officers. Estimated earnings are produced for students at sixteen gaining more than four O-levels and adjustments are made to take account of National Insurance contributions and tax.

We could question the way Thomas calculated the earnings forgone as he made no assumption for unemployment. Thomas does not provide figures for local unemployment , although he states that the local careers office had reported levels to be near or close to none for students with 5 O-levels or more. However, in the current economic climate unemployment would not be untypical amongst 16 year old students. Additional data was probably necessary on the students employment intentions, their parents support, and their part-time

employment.

This last piece of information on part time employment is important in the calculation of earnings forgone as it relates to how students divide their time between academic work, leisure and employment and the effect that this has upon their academic performance. Undoubtedly, employment during term will have an opportunity cost in terms of available study time, although the earnings may enhance leisure activities in favour of the learner. Further research should be undertaken in this area and probably a quite important piece of it could be on the choice the potential A-level students make when entering this provision. Is it a free choice between education and employment on equal terms? This could have substantial influence on the calculation of the earnings forgone. There exists an argument by Parsons (1974) that, from the individual perspective, lost leisure time should be valued at the same rate as forgone earnings.

The second issue relating to question 13 concerns private costs. Thomas calculates private costs using figures obtained from earnings forgone. Figures are given as private costs for a single A-level per single student. High and low estimates are presented for each institution according to whether a high or low labour market value of earnings forgone is selected according to student ability. Thomas acknowledges that these figures do not necessarily say anything about the effectiveness of the institutions but simply about how much time is allocated to A-level teaching and how much is not. As it was pointed out before, it would be important to find out how much time is given to non A-level activities or as support time. Information on this would offer significantly not only to the examination of the effectiveness of the individual students but to any micro-analysis of effectiveness.

We have already mentioned some of the costs that have to be borne by students and families during this period of time. There are other regular expenditures that have to be included no matter how small they might be: books, private tuition, revision courses. A more complete picture will be provided of education costs if, however, some state support given to students is subtracted from private costs. Benefits offered to students, council tax reduction, and probably any income tax exemption offered to parents should be dealt with.

Questions 15 to 19 are more general and relate to the nature of the study. They are listed in Appendix 4.9.:

The questions concerning costs and outcomes and the use of cost-effectiveness analysis in the future are very significant. Thomas, unfortunately, did not have detailed budgets and other financial data provided as a requirement of Local Management of Schools legislation. We must, however, admit that, on the general level, Thomas reports impressively valid data that allow him to draw conclusions that offer guidelines to administrators who would wish to make similar comparisons.

The final two questions of the study relate to the subjective notion of costs highlighted by his investigation of cost theory (see Appendix 4.9.)

In setting question 20, Thomas is influenced by the cost theory of Buchanan (1969). He admits, however, that the methodology he has employed involves an objective view of costs and therefore can not provide data that will fall within Buchanan's framework. On this point Thomas admits that his analysis says little about how educational choice is perceived from the point of view of the individual. Does the individual adolescent perceive choice? Are the utilities appropriate?

What about social welfare considerations?

Thomas produces cost-effectiveness ratios for each of the twelve institutions in his study. The effectiveness measure is taken from the A-level results obtained by the students on two bases: firstly a final standards criterion and secondly a value added criterion, that takes into account student prior ability as indicated by O-level results. The value added measure gives a more reliable indication of what the institution has contributed to student performance. Thomas makes no mention of the 184 project (Confidential Measurement Based Self Evaluation) although data collection for this project was continuing at the same time as Thomas was collecting his data.

According to Fizz-Gibbon (1985), a wide range of data was collected which were expected to relate to A-level grades, such as prior achievement, socio-economic status, class size, teacher characteristics and time variables. However, once an index based on average O-level grades was computed other variables contributed little or nothing to the prediction of A-level grades. This study has produced some interesting data, especially with respect to difficulty differences between various A-level subjects. One could argue that this was the pioneer to the ALIS project (A-level Information System) which constitutes a kind of a monitoring system of the performance of the institutions offering A-levels.

Thomas finds that the general pattern of results are consistent from the different cost perspectives. Sixth forms colleges have a distinct advantage over other institutions. Further education colleges and the tertiary college in the study come next in cost-effectiveness with the poorest performance by school sixth forms. Thomas notes that this poorer level of performance is associated with both costs and

performance.

He finds subject differences in effectiveness with social science subjects having one grade advantage over the mean, compared with modern language subjects which have a disadvantage approaching one half grade. Thomas raises questions concerning the difficulty of examinations for different subjects and how teaching expertise may relate to the requirements of different exam formats.

Thomas found positive correlations between the commitment of timetabled resources and the number of teachers programmed with a group and effectiveness. With respect of teachers numbers there was a small improvement with allocations of two or three teachers to a group, thereafter outcomes fell back to the mean.

A positive correlation was found between teacher qualifications and students performance up to Masters degree level, but declining with further qualifications. Results also show that women were marginally more effective than men. This was significant for the sample, as out of 540 groups within the study only 131 had women teachers. Age and length of service were found not to be significantly related to outcome, nor the salary scale of the class teacher. These last factors obviously have cost implications for the allocation of teachers to different groups.

Thomas's work is detailed and thorough on both theoretical and empirical grounds. He completes his theoretical enquiry on costs, efficiency and effectiveness and carries out a practical application of the technique by an exceptionally thorough investigation across the majority of the cost and effectiveness categories he has identified. The final cost-effectiveness figures are produced from institutional,

individual and social perspectives a fact which represents the thoroughness and completeness that characterises Thomas's whole analysis.

One can, in a summary, raise the following issues concerning Thomas's methodology and the practical application of his analysis (in many cases there were many good reasons, as explained by Thomas himself, why he did not deal with them):

1. The whole study relies on production function techniques and takes no consideration of process variables (for reservations on these techniques see Hanushek, 1986). In addition Thomas never addresses the issue of the existence of an adequate learning model to inform the selection of production function measures.
2. There is a failure to adopt a truly micro level approach to the analysis. Although data is collected at a classroom level no attempt is made for an actual micro analysis of resource flows of any kind.
3. There is a detailed description of the location and the collection of data on earnings forgone. The implications of the existence of local labour markets are not taken into consideration, however.
4. The use of time in the learning process is not treated in this analysis.
5. Student part time employment, their personal expenditure on learning resources and any state or council support may have an affect upon private and social costs are not accounted in this study.
6. The analysis does not relate post-compulsory curriculum to the compulsory one. This is important in an analysis of the cost-effectiveness of different forms of A-level provision.
7. The approach ignores social, moral and other non academic

reasons for selecting different institutions.

8. The analysis ignores the non A-level provision and the cost implications of it as well as of the support for students that lays outside the teaching of individual subjects.
9. Only A-levels are considered as the output measures of these institutions. The analysis does not attempt to assess the goals of this level of education from the society, individual and institution perspectives that are chosen to compare costs.
10. Thomas dismisses the SES factors from his analysis because of the use of value added which 'controls' for these factors. Such a comprehensive work would add a lot to knowledge if it related SES factors to the cost-effectiveness ratio before their dismissal.
11. Variables regarding school ethos, student school and subject satisfaction and school academic and organisational climate that might affect the cost-effectiveness ratios do not exist.
12. Variables on instructional leadership and management do not exist.

In 1995 A. Fielding reanalysed the data collected by Thomas using a multi-level approach. His aim was to focus on individual students in a hierarchical framework. Through multi-level analysis individual level and group level input variables are utilized as controls for comparisons. The results of Thomas are confirmed. School sixth forms appear less cost effective than institution devoted solely to education for post-16 year olds, that is FEs and Ts which are the most cost-effective. The rankings of the individual institutions in the multi-level analysis has got some differences from that of Thomas but these differences are marginal. Fielding finishes his article saying:

'It (the multi-level analysis) points also to cost-effectiveness analysis as an

appropriate criterion in forming value judgments in the context of relevant controls. This stands in contrast to the current government preoccupation with raw score league tables as performance indicators. The latter can be misleading.

(Fielding, 1995, p. 170)

Having reviewed the major work in the area of school effectiveness and especially cost-effectiveness, in the next chapter we shall proceed to the description of the design of this work: the data collection and the method of their analysis.

PART B

METHODOLOGY AND DESIGN

CHAPTER 5: Methodology and design

5.1. Introduction

This study lies in the field of cost-effectiveness analysis of educational programmes. The cost-effectiveness form was selected partly because its emphasis on criteria of effectiveness seemed well suited to the issue of provision of an A-level subject such as the A-level in Modern Greek. The educational provision at this level is an area where there might be a high level of agreement about educational objectives. The cost-effectiveness form of a model also seemed very appropriate for this field of provision of the Greek language, as all the actors which were mentioned in Chapter one involved in this provision would certainly be interested in its cost-effectiveness.

This chapter is descriptive as it firstly gives information on the specific framework of the study and its objectives. Secondly, it describes the sources of data for the study and the methods designed for their collection. Thirdly, it refers to the method by which this data are shaped for the analysis and to the type of analysis to be used. This chapter is also explanatory as it explains why certain data are collected and why some decisions on the analytical tools are taken. It is also evaluative, commenting on specific methodological decisions taken at various stages of the investigation.

The structure of the chapter derives from the definition of cost-effectiveness analysis given by Simkins (1981, p. 82), by which it is necessary:

'...to define programme objectives clearly, assess the degree to which various types of programmes are likely to lead to their fulfilment, and identify and assess the costs of the alternatives considered...'

All the sections of a cost-effectiveness study, that is objectives, alternatives, costs, models, and criteria, are closely interrelated. A criterion depends upon the objective which is used; whatever meaning we attach to costs depends on the alternatives perceived. Our understanding of the alternatives available and our definition of objectives are closely related to the specification we make of the model and probably lead us to examine rather different aspects of the organisational life. The above issues have another two elements in common as well. These are the consideration of issues of distribution and reliability.

This chapter includes three parts. The first one concerns the specific framework of the study. It refers to the specific main and supplementary research questions that this study tries to answer. This part also includes some information on the methods that were chosen for the collection of the data that a cost-effectiveness analysis needs.

The second part of this chapter refers to the design of the fieldwork and more specifically the sampling procedure and the questionnaire design. It also describes the collection of information on costs and the assumptions underlying this procedure. This part finally has a section on the design of the fieldwork for the cultural aim of these schools.

This last part of the chapter deals with the specific statistical methods of analysis which are to be used in the study. It describes ways of combining the results of the quantitative piece of work with those of the qualitative one. It also attempts to suggest ways of comparing the results from the analysis of the conversations, which

were held with three groups of students, to the results of the rest of the analysis.

5.2. Framework of the study

5.2.1. The choice of a method

The cost-effectiveness form was chosen firstly for the reasons described in the introduction of this chapter. Compared to a production function model it is preferred mainly because it does not have to assume, in a way that a production function model has, that schools are technically efficient. Cost-effectiveness studies make no such assumptions. They are means of identifying the least cost alternative from those available, none of which may be the most efficient of possible alternatives. In the case of this study, ex ante research objectives reflect a combination of information and ideas concerning this field of inquiry which are drawn from the relevant theory and empirical work. The work of H. Thomas and especially his form of inquiry were influential, although the model used is an expansion of Thomas's model as it includes process variables that may influence the A-level performance and incorporates a different kind of analysis in an effort to 'measure' the effectiveness of these institutions to achieve their cultural aim.

The thought underlying the methodology applied in this study is this: if certain kinds of characteristics, or some of the organisational layers within institutions, do have a different effect on the examination achievement of pupils, such an effect will show some kind of a pattern. That is why a longitudinal study was chosen, including the samples of two successive student cohorts of this A-level, those who took their exams in 1994 and those who took it in 1995.

In designing the fieldwork for this study a decision had to be made concerning the use of qualitative or quantitative research methods. Awareness of the relevant literature and empirical work carried out in the field, made the choice of purely quantitative methods quite suspect and insufficient. The view of combining qualitative and quantitative work seemed very attractive and more secure as one method could complement the weaknesses of the other (Brannen, J, ed,1992). Information concerning the research questions set, would be collected through questionnaires with structured and open ended questions. Semi-structured interviews would also be conducted with teachers and Heads and information given in documents that circulate in these schools will be analysed if necessary.

A list of the characteristics or variables that were found to influence the effectiveness of post-secondary schooling was then made and the ones that this study could incorporate and might help answer the research questions set were chosen. At this stage, the decision was made to incorporate the process variables that relate to the management of the school and its ethos and climate and test their correlation to the measures of cost-effectiveness.

A familiarity with the existing models of the education productivity and/or school effectiveness, was quite helpful at this stage. A choice of a certain model, suitable for this research, had to be made. The model given by Willms (1992, p. 33) was considered the most comprehensive and quite suitable for this study. Some adjustments and/or additions had to be made, given the special conditions under which these schools operate. Selecting information on all these 'variables' can be considered a very ambitious and probably 'dangerous'

exercise. The thought, however, was that it is worth trying to see what reality reveals.

At this stage I had to consider the effect of the mainstream schooling on these students and whether this could be incorporated into the model. Including a separate piece of work on this was very difficult as these students came from a wide variety of schools. Their GCSE score which would be included in the model would incorporate some of the effect of the mainstream schooling. Controlling for SES variables would also minimise the effect of factors which lie outside the Greek school. Also, information is collected on which school the students attend through their questionnaires. This will be considered as a separate dummy variable in the model. In addition, I always had to consider that this was a single researcher's work, with a limited budget and, therefore, should remain within these limits.

The design also had to include a method of testing the "cultural aim" that these schools pursue. As the review of the literature in similar fields showed the most appropriate method to test this would be DA (Discourse Analysis) with some elements of CNA (Conversation Analysis). As it has emerged in the discussion of these methods DA focuses on the interpretation of force of discourse, while CNA focuses more on the interactional side. Some elements of CNA are appropriate to the present research not only because it deals with sequencing acts of conversation and compliments DA, but also because it is directly linked to the cultural dimension. The features of conversational behaviour stated should be interpreted in relation to the values connected to them. A contrastive dimension of the analysis could be useful when comparing the conversational style and the discourses of different cultures.

The general decision was to collect as much information as possible and with different methods without, of course, exhausting the participants. That is the reason that a variety of questions would be included on the same 'variable', with a choice of answers, ranked answers, attitude-scale answers and open-ended ones. Then, it was decided that, wherever possible and necessary, information for a research question would be collected from all the participants-actors in the educational process. This would give a more spherical view of the situation and offer a more stable basis for the discussion of the results and probable conclusions and generalisations.

The theoretical and empirical work that guided me in choosing both the variables to be used in the model and the tools for collecting and analysing data regarding these variables were elaborated upon in the relevant chapters. Further elaboration will be made when discussing the results of the analysis.

5.2.2. Research Objectives

The first and major aim of this study is drawn from the objectives that the G.S.S. pursue which are:

- *the maximisation of school performance and*
- *the cultural aim of helping these student maintain their Greek identity.*

The second objective cannot be ignored as it is common in all these schools and it is made clear in all the documents or proclamations that exist in this sector. This study will try to determine the cost-effectiveness of the A-level Modern Greek subject across the different individual or groups of institutions. It will also expand the analysis in order to evaluate this provision regarding the cultural aim as well.

The study, then, will make a deeper investigation into this provision by seeking answers to the supplementary research questions that are presented below. These questions are to be used in structuring the later fieldwork and analysis.

The first category of questions reflects the input-output tradition which was described in the chapter of theory and as it is illustrated by Hanushek (1976,1989), Levin(1976,1983, Cohn and Geske (1990), Monk (1990) and others (these are dealt with in detail in an the chapter of the review of the literature). More specifically, the study will make an effort:

To establish a model to test for the C-E of the different types of G.S.S. for both aims described above. That is it will find out whether the G.S.S have differences in pursuing their educational aim and their cultural one. Then, the study will try to explain any differences that may occur.

To explain the differences the study will seek to answer the supplementary research questions it had set. That is:

- **A.** To find out the extent to which certain characteristics of the teachers affect the cost-effectiveness of these schools. Here is the first list of the set of sub-questions the study attempts to answer concerning this question:

*Do degree qualifications influence the C-E of teachers?

*Do the salary scales of teachers influence their C-E?

*Does the type of responsibility held by teachers influence their C-E?

*What effect does the length of teaching experience have on C-

E?

*What effect does the age of the teacher have on C-E?

*Is there any difference between the C-E of male and or female teachers?

- **B.** The next category of questions reflects the influence of an organisational perspective on the cost-effectiveness and is concerned with assessing whether different layers within organisations do have an effect upon learner outcomes. These objectives are:

*Is the number of teachers time tabled with A-level provision a factor in its effectiveness?

*Has the establishment of this coordinating body of G.S.S. in G.B. influenced the effectiveness of A-level provision?

*What are the perceptions of staff, students, parents, managing and funding bodies on alternative measures of effectiveness other than A-level passes?

-**C** The study tries to find out the extent to which management techniques and leadership characteristics influence the C-E ratios. More specifically, it searches to find the effect of :

*The principal's involvement in the appointment of teachers

*The setting of goals and the strength they are pursued

*The teachers' involvement in the school organisation

*The teachers' cooperation

-**D.** An effort is made to examine whether certain characteristics of the school ethos or climate affect the C-E ratios. These characteristics could be:

- *The pupil-pupil relations
- *The pupil-teacher relations
- *The discipline climate
- *Pupils' satisfaction
- *The teaching method the pupils are exposed to
- *The degree of the pupils' belief in the aims of the schools.

-E. Another category of questions were designed to test aspects of distribution and reliability of costs and benefits :

- *How does the cost effectiveness of A-level provision differ from the perspective of the student and the institution?
- *The relevance and significance of earnings forgone for these students and the consequences of this on the cost effectiveness ratio.

-F. A further category of questions arises from the nature of the study. It is important to reflect upon the usefulness of the approach as a means of appraising this particular problem and as a technique suitable for more general application to policy appraisal in education. In summary :

- *Is C-E analysis the most appropriate way of examining these particular issues ?
- *Is it possible to generate any findings about the methodology of this study to other applications of C-E studies ?
- *How can information within educational systems be organised to provide better evidence on costs and quality?

*Does any part of the study offer guidance to ways and means of improving this provision?

*Aside from judgments about cost effectiveness, what can we learn from patterns of costs, processes, outcomes.

5.3. The Design of the Fieldwork

5.3.1. Sampling Procedure

These research objectives can only be achieved through an inquiry which includes data on alternative means of providing A-level courses. In Thomas's study the alternatives were between the organisational form of a school sixth form, a sixth form college, a college of further education and a tertiary college. The alternatives were not extended to include private sector schools or colleges by design.

This study is, by design, settled in the 'area' of Greek supplementary schools in London. As explained there was no necessity to exclude any Greek language A-level provider in the general organisational form of these schools as they are described in an earlier section. These are not 'public' schools as those described by Thomas and could be called 'less conventional' providers.

In the area of providing courses in A-level Modern Greek in these schools the principal choices lie between the organisational form of a K.E.S. school (church school), O.E.S.E.K.A. school (parents' association school) , and I.S. (independent school). The institutions included in this study represent this range and are drawn from different L.E.A's in Inner and North London (Campten, Haringey, Southgate, Enfield, Potters Bar, Finchley). The reasons for this geographical 'choice' are: firstly, the

greater majority of these schools are situated in these territories and secondly, in these areas all three providers have established schools. According to Levin (1983,p. 37) any kind of cost analysis is premised on the view that decision makers have choices. In selecting the alternatives to be considered it was certainly necessary to include the principal organisational forms within the maintained sector. It also seemed desirable that, where possible, comparisons should be within and between the three types of providers.

A weakness common to studies of effectiveness and cost-effectiveness is that their information on institutional or course provision is cross-sectional. Cross-sectional studies inevitably have the reader or the analyst wondering whether the same results would be obtained from repeating the study at another time. Longitudinal studies are a means of overcoming this problem. This investigation collects data for two cohorts of students. Those who took the exams in 1994 and in 1995. Because these A-level courses normally run for three years this means that the data on the cost of the provision will be collected for four years from 1991 to 1995.

A further weakness of work in this field is the use of data at different level of aggregation. Measures of average performance are often used to draw conclusions about school effects. In this case there is a possibility that this averaging may obscure differences within and between classrooms. This study tries to overcome this problem of school averaging by collecting data on individual students and the groups being taught in the courses provided. It takes the group as the basic organisational unit for the teaching purposes in schools.

The sample of the schools in the study is partly stratified. The schools of K.E.S. are chosen to represent a range of locations, number of

students and socio economic family factors. There is one school in Turnpike Lane, one in Wood Green and one in Inner London. Three schools were chosen that belong to the Greek Cypriot Parents Association or O.E.S.E.K.A. with the same criteria as far as possible. It has to be mentioned that the schools that belong to O.E.S.E.K.A. usually have a small number of students because they are close to each other. An effort by this coordinating body to create a consortium of schools has not yet succeeded. The schools chosen are in Tottenham, Enfield and Palmers Green. Three independent schools are chosen in the same way . These are in Potters Bar, Finchley and Enfield.

The head teachers, the teachers and the students of these schools that are involved in the A-level provision were included in the sample. The teachers and the head teachers will be interviewed in a semi-structured interview aiming to collect information that could throw light on the research questions set. The students would be asked to answer a questionnaire which includes different types of questions (structured, scaled, open-ended etc) set to collect information on the various objectives of the research. I should point out that, where possible, information on the same objective was sought through different tools/questions, for a better informed enquiry. In a section below I shall describe in detail the thought underlying each question set in the distributed questionnaire.

5.3.2. Designing the collection of costs

General considerations

The discussion in the section of costs has clearly shown the importance that this study will attach to an opportunity cost approach for the measurement of the resources used. The view of cost to be used

is one mostly based upon Bowman's (1966) analysis, which, while located in the orthodox paradigm of calculating cost through a commodity approach, is clearly influenced by other perspectives.

As far as the question of who bears the cost is concerned, the principal policy question addressed in this study concerns the appropriate organisational form in which to place A-level courses, a choice which has implications for the student, the providing organisations and the society. Consequently, it is these which constitute the three levels at which forgone alternatives will be examined. The term 'providing organisations' embraces the providing schools and the governments of Cyprus and Greece that partly fund this provision.

Having in mind what Bowman says about measuring 'what is put in' and 'what is forgone' we should not forget that the opportunity cost view is merely defined by assessment of alternatives and cannot evade the problem of how to adjust for the existence of idle resources. It could be that the arguments she puts in favour of her recommendations that unemployment should be ignored have ground, but are not strong enough to allow the unemployment effect to be ignored especially if we think that the entry of these numbers of students in the local market could, as well, account for a rise of the level of unemployment. The issue of marginality should not have to assume perfect conditions of employment even when there is a consistency of 'what is put in' and 'what is forgone' approaches to costing. There is no intention to ignore the value of the time that mature students put into their schooling which is very important. An effort will be made to estimate the value of the best possible alternative to the time that students put into their schooling.

Bowman (1966, p.424) points out that the time dimension of costs can

incorporate the time period over which costs are incurred when one activity is engaged rather than another, but also 'leads to consideration of the extent to which present choices condition can range future alternatives'. This last aspect is relevant to this study and this is why an effort will be made to follow a sample of students who passed this A-level subject in order to find out whether they used this qualification to enter Tertiary Education or a better paid job.

As to the first item of time dimension, dealing with the period over which costs are incurred, this study determines the beginning and end of a cost period as such: For an A-level group, the boundaries are the times when a group first came into existence until the time it ceased to exist as a time tabled activity in that group. We shall explain in detail in the relevant sections how these general rules will be applied in practice.

As far as the institutional constraints in costing an educational programme are concerned , we shall examine what the options open to decision makers are at different levels in the problems being examined. Students are given institutional alternatives and must choose from the menu regarding the days, hours, and means of delivery. What is the role of the Coordinating Body of the Greek Supplementary schools in G.B. in this situation? These considerations will arise in later chapters when costs and outcomes are considered from the perspective of different interests.

Types of costs included

In grouping the types of costs I took into consideration the indexes provided by Thomas (1990, p.76) and Stone (1994, p.4) . I included both direct and indirect costs as those defined by Psacharopoulos and

Woodhall (1985, p. 171). The main categories used concern the agents that bear the costs and are:

A. Institutional costs

B. Individual costs.

A. 1. Reccurrent expenses

2. Teachers' salaries

3. Capital expenses

B. 1. Earnings forgone

2. Any other expenses related to this provision

Planning the collection of data on cost

In the case of this field of inquiry the budgetary costs cannot be collected only by the L.E.A.s as the establishment, existence and operation of these schools is quite 'idiomatic' in terms of their funding bodies which could be: the L.E.A.s, the governments of Greece and Cyprus, the Local Community Educational Committees and the Coordinating body of the Greek supplementary schools in G.B.. As a result, details on the expenditure are collected from different sources accordingly.

Being aware of the two types of methods that are used in costing educational programmes, that is the budgetary method and the ingredient method (Stone, 1994, p.4) and their strengths and weaknesses, an effort was made to collect information not only on the budget but on the real expenditure as well in order to calculate both planned and real expenditure where possible. These calculations give a better picture of the costs that occur at the institutional level.

Some information was obtained from individual school budget provided by the L.E.A.s and/or this coordinating body and additional information was sought in the interviews with the Heads. Information on teachers' salaries was drawn from school records, from the education office of the Greek Embassy in London , from the Education office of the Cyprus High Commission in London and, additionally from the interviews with the teachers. All the funding bodies were the main sources of information on expenditure on books and materials.

Students' costs are represented by earnings forgone data collected from Careers officers in the local authorities. Wherever considered necessary additional data are collected from questionnaires and/or interviews and will be compared to the information given by the local authorities. The information on the other expenses that the students have to bear in order to attend this provision are collected via the questionnaires.

Earnings forgone and all the other costs are added to provide a measure of social costs. In the later chapters and appendices more information is be provided about the sources of this cost information and also an account is given of the changes and adjustments necessary to be made to the data.

This method commits errors of omission and commission. There could be, for example, unmeasured costs e.g. parental support or unmeasured resources e.g. students respond to poor teaching by substituting a greater proportion of their time. This study tries to throw some light on these errors through collecting information via questionnaires.

The adjustment from money to real prices could be regarded as an error

of commission. Levin (1983, p.93) advises that,when costs are spread over more than one year,the 'simplest way... is to assume that the general rate of increase in prices' should be incorporated in the calculations. This will be the procedure used in this study , where the Retail Price Index (R.P.I.) will be used as a basis for indexing costs. Of course, no reader should forget Hough's reminders of 'Relative price effect ' and the 'rate of inflation in education' (1981, pp. 90-6). The author reminds us of the problems of applying the methods of labour economics in calculating costs in education The interest in this study is primarily on internal efficiency, and therefore differences between an education index and the R.P.I. are likely to have a negligible effect on the comparisons. Any differences would have some effect if there was some difference in the capital/labour ratios in different institutions and the inflation rates of capital and labour were diverged.

Costing capital has special problems as well. In the case of the schools that pay rent, capital cost will be calculated on the basis of this cost. In the case of the schools that own their buildings their opportunity cost will be calculated. The study will follow Levin's advice on the procedure (1983, p.67). He advises that valuation should be based either on rent in alternative use or amortisation costs. Because, however, these two measures are based upon the rather different principles of costing discussed earlier - the 'what is forgone' as against 'what is put in' - they can lead to quite different results.

5.3.3. Design of the Questionnaire

The questionnaire (see Appendix 5.1.) was designed and tested in a pilot study for its reliability. It was designed to collect information on variables that can help provide answers to the core as well as to the supplementary research questions. With respect to the kind of

information that questions aim to collect, the contents of the questionnaire can be divided into the following sections:

SECTION ONE: the socio-economic background of the students.

The study uses the value added method of measuring the performance of these schools which is supposed to control for SES variables (Thomas, 1990, p 80). However, I thought that, for a fuller inquiry, I should include information on the SES of the students and not only to use it to describe our sample but to test its correlation with the C-E ratio as well.

It is stressed in different studies that among the variables that describe the SES of the students, the most influential one is the parents' education (chapter 4). I included, however, questions aiming to collect information on more issues that are related to the SES of the students aiming at the formation of an economic 'profile' of the family which could reveal any 'fake' answers. These questions do not necessarily correspond to a variable by themselves :

- age (q.1)
- gender(q.2)
- country of birth (q.4)
- years they lived in England (q.6)
- nationality (q. 7)
- religion (q.8)
- countries parents were born in(q.9)
- father's occupation and education (q. 10)
- mother's occupation and education (q. 11)
- type of accommodation (q. 12)
- family composition (q. 13,14)

SECTION TWO: the students' GCSE performance and their attendance in this A-level.

These pieces of information are used to describe mostly the previous academic performance of the students in the sample which will be used as an entrance qualification/value for the measurement of the value which has been added by the institutions. Some information concerns their present academic 'situation'.

- how many years ago they have started their A-level (q. 3a)
- if they are repeaters in this class (q. 3b)
- their GCSE pass mark (q.4)
- if they study other A-levels (q. 16)
- which other subjects of A-level they are studying and where (q. 17)
- when they are taking their exams in the other A-levels (q. 18)
- when they are taking the exams in the Modern Greek A-level (q.19)

SECTION THREE: the reasons they are taking this A-level and their plans for using it.

This section sought to find out whether these students are self-motivated in their choice to attend this A-level or they just follow the wish of their parents. It is generally believed that motivation is an important factor to success (chapter 4, p.). The study also seeks to find if they plan to use this A-level and where, in order to examine the weight that this has on the student's performance. More specifically in this section it is asked:

- why they take this A-level (q. 20 which is a multiple choice one offering the respondents the more opportunities in answering).

- what they intend to do with this A-level (q. 21 in which the choices are between entering higher-education, getting a job or any other possible use).

SECTION FOUR: the students' future and present employment choices and the parents' financial support.

These questions aim firstly to collect information on the students' employment plans (q. 22), their employment status in relation to their attendance of their A-level courses (q. 23) and the financial support they get from their parents (q. 24).

SECTION FIVE: concerning the students attitude towards their G.S.S.

- One question seeks to find out whether the existence of the G.S.S. as a provider of the Modern Greek A-level was an influence in the students' decision to take this A-level (q. 25).
- Question 26 tries to monitor the students' considerations and expectations with regard to their G.S.S.. That is whether they think that a G.S.S. should aim to good examination results or to large number of students, to both or to other outcomes.

SECTION SIX: the students' attendance, their homework and their participation in other activities that the G.S.S. offers.

It was found in effective school research (Reynolds, 1994) that students attendance is a significant factor in their performance. The amount and type of homework that the students get, the reasons for doing it and the feedback they have could also be a factor in their performance. The information collected on this issue through the students' questionnaire is supplemented by the one taken via the

interviews with the teachers. More specifically the questions in this section aim:

- to find out how many hours the students spend on their homework (q.28)
- to tackle how regularly students do their homework (q. 29)
- to monitor the reasons why the students do their homework (q. 30)
- to find out how often the students attend the school (q. 31)

SECTION SEVEN: the parents' involvement in their children's performance.

It is widely argued (Coleman, 1995) that the parents' positive involvement in their children's education could be a significant factor in their performance. Parental involvement is a very wide field and this study can probably not be as elaborative as it should be, but it is hopefully going to be informative. Some additional related information is collected via the interviews with the Heads and the teachers.

- Question 15 seeks to find whether the students parents visit the school, how often and why.

SECTION EIGHT: the attitudes of the students as they can be measured through a five-point scale from strongly agree to strongly disagree.

The information in this section could either be supplementary to some other different kind on the same variable, or stand on its own and may or may not be used in conjunction with the cultural aim that these schools promote. Most of the scales were taken from the attitude scales suggested by Hazelwood (chapter 4) and/or used in ALIS (A-level information system). I tried to include some measures of the

attitude towards their Greek origin and their Greek school which can be compared to the results of the conversation analysis.

- a group of questions aimed to measure the attitude towards the work and the material used in these classes.
- some ranked questions tried to monitor the teachers' conduct with the students and the Heads handling of any problems.
- a group of ranked questions referred to the measurement of the attitude towards the teacher.
- another set of questions were supposed to measure the attitude towards the subject.
- some questions sought information on discipline and the teachers' and Heads' role.
- a set of questions tried to measure the attitude of the students towards their Greek origin.
- another group of questions referred to the students' attitude towards their Greek school.

SECTION NINE: the description of the effective teacher and the effective school they had in mind and their predicted grades.

This section is composed of open ended questions and seeks to collect information which can throw light on some previous answers to questions of a different type. Only the last question which asks about the students readiness for the exams and their expected mark seeks specific information on the students expectations which can be related to their performance (Mortimore, 1995).

5.3.4. Structuring the Interviews

I planned to conduct interviews with the teachers of the student groups

that participated in the study as well as with the Heads of the schools involved too.

The interviews with the teachers

These interviews (see Appendix 5.2.) were semi-structured, accompanied by some ranked, scaled questions on a small questionnaire and include information on the following:

- The teachers personal characteristics such as sex, age, religion, nationality, degrees and experience. Certain personal characteristics of the teachers have been found to influence the effectiveness of their teaching (Thomas, 1990) and that is why I shall try to investigate this matter.

- The teachers perceptions on the provision of this A-level in the G.S.S.. This information can throw light on some attitudes of the teachers and complete the picture about the purpose of these schools and their academic climate which is generally considered to be a significant factor for school effectiveness (Mortimore et al, 1989).

- The material that the teachers use in class. It was found in relevant studies (Mortimore, 1995) that the curriculum and the means by which this is taught have an influence to the running of an effective school. Additionally, the teachers' collaboration in this field is found to be an important factor too. An effort is made to collect information on this aspect of the teaching process not only through an open question but through the ranked questions as well. Actually, ranked, scaled and open ended questions were included in most sections.

- The teachers' view regarding the students' quality is also an

objective of a question. The teachers' aspirations for their students is considered a significant factor to their performance (chapter 4).

- Their view on the management techniques that are used in their schools is sought as this is also an important variable in school effectiveness literature (chapter 4, p.).

- Their relations to parents and committees as far as their work is concerned. The good relations amongst all the actors of the educational provision are considered a significant factor to educational effectiveness (Coleman, 1995).

- Their method of teaching and the degree of their freedom in class is sought in the ranked questions, although the pilot study was not very encouraging in this aspect (Mortimore, 1989). The results of the questions in the teachers' questionnaires are presented in averages by provider (type of school) and are used to inform the questions of differences in the performance in the A-level examinations'

- The amount, type and frequency of the homework they put to their students and their expectations and response to it. I have already commented on the issue of homework in the section of the students' questionnaire (Rutter et al, 1979).

- The way they were appointed. It has been shown (chapter 4) that the principal's involvement in the teachers' appointment is a significant factor in the students' performance.

- Their proposals for improvements in the provision is probably be useful to this study as it throws light on several aspects of this provision.

Interviews with the Heads

The interviews with the Heads had two major objectives:

- a. to collect any primary, additional or secondary information on costs.
- b. to collect information on aspects similar to some we have already dealt in the teachers' interviews.

As far as the second aim is concerned, the information was on the following issues. What I have not elaborated on in the section regarding the students questionnaire we shall do so here, otherwise I shall just mention the areas we are planning to collect information on. These areas are:

- The Heads' personal characteristics as in the teachers' interviews.
 - Their views on the purpose of these schools which can be considered a factor to school effectiveness.
- Their views on the student intake.
- The discipline climate in their school and the way they pursue it.
- Other management techniques they use such as: the employment prospects they offer to their teachers, the academic environment and how they pursue it, their relationship with bodies, parents, teachers, students, their aspirations for their school and teachers.
- Some organisational aspects are also investigated in these interviews as far as possible, these being: absenteeism of teachers and students, their views on class size, time allocation in their school, the

appearance of the building and their views on its influence to teaching and their views on teachers' salaries.

5.3.5. Design of the Cultural Analysis.

Practically, the fieldwork for this piece of analysis was planned as follows: One group of students from each 'type' of school would be used as 'focus' group. The aids to be used to help conversation would be enabling questions where considered necessary. These questions would open up what the students have to say regarding the 'maintenance of Greek Identity' through this A-level provision or the 'amount' of Greek culture they received in it. The results of this analysis are compared to the results of the analysis of the students questionnaires which include open ended questions and attitude scale questions on this matter. The related information of 'the attitude towards the subject' and 'the attitude towards the school' and 'the participation in other activities' which are collected through the questionnaires could also be considered as relevant.

In order to assist the procedure of the conversation and keep it in the framework of the topic as far as possible, a set of enabling questions/issues representing Greek culture would be prepared to be used as guides if and where necessary. The conversations would also be prepared in a way that could minimise problems of power and luck. The subjects in the groups would be randomly chosen, their teachers would not be present during the conversations and an effort would be made to create a friendly environment in the introductory procedure which meant introducing myself beforehand (usually when distributing the questionnaires), sharing informal talks with them during my visits

at their schools and allowing them to speak in any language they felt more comfortable with and even change from one language to the other if that was more convenient to them. This last issue could be interesting in the analysis because language patterns and discourses are supposed to be connected to culture:

'Culture is not solely represented and reinforced by language. However it is generally the linguistic channel via which culture and its accompanying thought world is thought to be active.'

(Loveday, 1982, p.47).

The notion of culture used in this study is within the Members Theory of Culture. This is not constructed as a scientific idealisation but mostly as a practical activity to distinguish, for practical reasons those who have identities, rights and obligations in common. In this analysis we shall be concerned to show how culture is transferred in their talks, their descriptions, their formulations, their disputes and their searches for help (D. Benson and J Hughs, 1983, p. 148).

The teaching of A-level Modern Greek can be considered literacy education which represents a certain policy of the actors (see p.). In the context of ethnicity it is believed that literacy policies and practices play crucial roles in accounting for and justifying differences of colour, race, language and class. (P. Freebody and A. Wench (eds), 1992).

Ethnicity has been described as the politicisation o culture. We use the concept of ethnicity as the one which yields together individuals who share history, culture and community; who have an amalgam of language, religion and regional belonging as common; and perhaps, most critical of all, they come from the same stock. (F. Wilson, B. F. Fredercksen (eds), 1995)

Within the frame discussed in Chapter three and above, the enabling questions prepared for the conversations aimed to open up what the students have to say regarding the maintenance of Greek identity and Greek culture. Culture will be as observable phenomena which includes behaviours and products (Robinson, 1985, p. 8) and culture as non observable which consists of ideas. The enabling questions, thus, included information on the following :

- How they enjoyed taking A-level Modern Greek.
- How they enjoyed coming to their Greek Supplementary School.
- Their parents' attitude towards their coming to G.S.S..
- Their view concerning the Greek culture they obtain in their G.S.S.
- How they describe 'Greekness' and how they feel about being Greek.
- Whether they have Greek friends and how they like them.
- What language they speak with their Greek friends
- The Greek customs and traditions they keep and why.
- Their plans for the future related to this A-level and their Greek origin.

More specifically, this qualitative piece of work will be based on the consideration that through 'talk' and 'conversation', the Greek Culture is represented in a way that can be analysed through Discourse analysis with some elements of Conversation Analysis. Culture will be considered as cognitive and symbolic in which the ongoing dialectic process will be taken into consideration as well. More on the type of analysis we plan to make will be written in the relevant section of the analysis of the data.

5.4. Design of the analysis

5.4.1. Analysis of the Questionnaires

The first stage would be a descriptive presentation of the results of the 'quantitative' type questions. Tables and graphs would be used for a clear presentation of the results. Cross-tabulations would also take place to find out whether there are any differences amongst the schools and/or the providers for the different variables. The chi square test would be used to test for any significance of the differences that may occur. An effort would, then, be made to find the correlation of these variables with the A-level grades of the students of each school, of each group of schools and of the sector as a whole. I should then code and analyse the open ended questions and compare the results of this analysis to the previous ones

Then, inferential statistics would be used to analyse the Cost-Effectiveness of the A-level Modern Greek provision in the G.S.S of London. We have referred to H. Thomas's (1990) similar type of work in the previous chapters. I have also commented on the type of statistical analysis he used which was the ANOVA of the SPSS package (analysis of variance). Analysis of Variance and Regression Analysis were the two types of analysis procedures that, according to the needs of the present study, could be employed. Although in some aspects of data analysis the two techniques bare similarities, or show equivalence , certain of the differences between them counted in favour of regression analysis.

Since this is not the appropriate place for comparing the two methods, only a brief reference to the reasons that dictated the use of regression analysis will be given. Regression analysis was considered more suitable for the present study because:

1. Both continues and categorical variables were to be used in the same models.
2. Unequal cell frequencies were obtained for different groups.
3. The relationship between independent variables and the dependent one were of theoretical interest.
4. Finally, the reason that multi-level regression analysis in particular has been chosen at a certain stage, was that two level variation needed to be studied. This would offer more detailed and reliable results on the effects of the schools on the A-level scores.

The thought which underlies the use of Regression analysis in this particular study is that if schools are to be fairly compared according to their A-level scores, I need to know the other factors that the A-level score appears to depend on. In particular, some allowance needs to be made first for individual contributory factors over which school has no control (such as age, gender, ability, SES etc). Correlation can tell part of the story, but the technique which is most commonly used is multiple regression (Woodhouse, 1996).

Multiple regression examines the effects of independent variables on the dependent variable. When we look at a regression model we seek to find answers to questions such as: what is the form of the function/model, what variables are included in it, what are the coefficients of the variables. We then analyse the regression coefficients aiming to find the relationships between the the dependent variable and the other variables of the regression. We look for the best fit and determine whether there is any significance in the results we

get. We comment on the explanatory power of the regression, compare the results to those of previous research and express our opinion for further elaboration. Of course the variables put in the regression model are depending upon the model of theory used.

Multilevel modelling is an extension of multiple regression which takes account of clustering and allows a fuller exploration of variation in the underlying population. As Goldstein (1987) clarifies in his introduction:

‘ The starting point for this book, therefore, is the proposition that the existence of hierarchically organised data implies that we should take that hierarchy into account when we analyse data. In subsequent chapters we analyse why failure to account for hierarchies may lead us into troubles; and how the proper incorporation of hierarchical knowledge can be substantively illuminating’

In recent years, much criticism has been levelled at the lack of recognition of the hierarchical structure and the reliance on aggregate data. Most of the school effectiveness literature (see chapter four) advocate the use of modern methods of multi-level analysis.

5.4.2.: Analysis of the Interviews

The interviews include quantitative and qualitative data which will be analysed in appropriate ways. The analysed data will then be compared with the ones obtained from students’ questionnaires. Any similarities or differences will be spotted and an effort will be made to find the correlation of all these variables with the C-E and spot the significant differences amongst the schools and the providers which might help to explain any possible differences in the cost effectiveness if these institutions.

5.4.3.: Cultural Analysis

The frame of this analysis was set in the previous section. At this stage we go a little further to say that the degree of 'cultural difference' could be judged on the basis of how much schematic knowledge people share. Examination of cases will take place to see how much it confirms the hypothesis. Discourses will be identified and isolation of a set of basic categories or units of discourse will take place. Discourse will be identified as a set of assumptions which cohere around a common logic and which confer particular meanings on experiences and practices of people in a particular sphere.

Then, a formulation of a set of rules will take place which will be used for delimiting well-formed sequences of categories (coherent discourses) from ill-formed sequences (incoherent discourses) (Levinson, 1983, p. 286). The 'topic' of the conversation is the identified 'problem'. The topic framework can incorporate all the reasonable judgments of what is being talked about. It consists of elements derivable from the physical context and from the discourse domain of any discourse fragment. The working definition of the topic will be the one used by Murata 1994.

It has been said that the results of this analysis will be compared to the ones of the other analyses in an effort to achieve a more global and spherical picture of the effectiveness of this provision. Having reviewed the major methodologies that were chosen for this research and having designed the collection of the data and their analysis, I shall proceed to the next chapter. Chapter six will deal with the piece of empirical work which I undertook and the analysis of the data I collected on the first goal that the G.S.S. pursue which is related to the students' performance in the A-level Modern Greek examinations.

PART C

ANALYSIS AND FINDINGS

CHAPTER SIX: Description of the sample, calculations of the costs.

6.1. Introduction.

This part of the thesis presents the analysis of the data which I have collected in the way described in the methodology chapter. First I describe the fieldwork undertaken to collect the data on effectiveness, on costs and on the cultural aim of these schools. Then, I proceed to the description of the sample before reporting the findings from the questionnaires and the interviews in the next chapter. Having finished with the description of the data on school effectiveness, I then report my findings on the costs and present the results of the calculations.

6.2. Description of the fieldwork.

6.2.1. The collection of data on school effectiveness

I collected data on school effectiveness from the students, the teachers and the head teachers of the schools in the sample. This data was also supplemented by information from documents, meetings, memos etc if and where necessary. This additional information was mostly used for purposes of supplementary and contrastive analysis.

The choice of schools proved to be a more complicated procedure than first envisaged for the following reason: some schools that used to run a two year course for this A-level, decided to change it to a three year one. They begun to materialise this from the year 1993-94. This situation automatically excluded some schools from the sample and the

choice was limited among those schools that were running a last year course in the A-level Modern Greek in 1993-94, or, in other words, among the ones that had students taking their exams in Summer 1994. The 1995 student cohort did not present this difficulty as the actual choice of schools had to be completed in the first year of the fieldwork.

Among the thirty-one schools that provide this A-level provision less than half ran the last year of A-level . I randomly chose nine of these to include in the sample, three of each group of providers, preferably the ones that had the larger number of students. A considerable number of schools ran this classes with only 3-5 students. Three schools of my sample were from the church schools, three from the O.E.S.K.A. schools and three from the Independent schools. Information from the Cyprus Delegation Office records said that the students who attend the A-level Modern Greek in London are 400. Of these almost 150 in each year were in the third year of their studies (no exact numbers were available and it was hard to obtain of any reliable information on this question). I checked the information on the numbers of the students with the numbers I got from UCAS (The University Council of Assessment). The schools used in this sample had 102 students in the first year cohort and 100 in the second year one. This meant that more than 60% of the population was included in the sample in both years.

Having chosen the schools of the sample, I negotiated access to them via different channels in every case, depending on the status and the organisation of the schools. Whenever the head teacher was a member of the Greek or the Cyprus delegation, I approached their offices first and then I spoke to them personally. Otherwise, I had to contact the parents' committee first and then approach the head teachers personally. I informed the head teachers of my research topic and talked to them about my previous visit to the Archbishop who is the

president of EFEPE (the coordinating body of these schools). I referred to the Archbishop's positive response to this work and finally asked them for their help and cooperation.

In most of the cases access was gained straight away. Sometimes I had to get back to the schools in order to give the people in charge the opportunity to organise their time better. The head teachers, the teachers and the students were rather cooperative and talkative most of the time. The response rate to the questionnaire was almost 100% since, in most cases, I distributed the questionnaires myself when I visited the schools and collected them straight away.

I, also, interviewed the teachers and asked them to fill in a short questionnaire which included ranked multiple choice questions. The filling of the questionnaires took place either on one of my visits to school, or at an arranged, mutually convenient time. The interviews with the head teachers were conducted mostly outside the schools as they were very busy while at school.

I collected the results of the students in the A-level Modern Greek exams from their teachers or and from the head teachers of their schools. Sometimes I had to receive complementary information from the students themselves, as the examination results were not kept in the records of all these schools. I also asked for the results in the A-level Modern Greek from the University of London Assessment Council which I kept for comparison.

6.2.2. The collection of data on costs

The idiosyncratic circumstances under which these schools are being run created some problems in the process of collecting data on the cost

of this provision. I had, therefore, to undertake some qualifications in order to proceed with this piece of empirical work. These qualifications are:

- It would have been ideal if I could have a real micro level approach in costing this program, that is being aware of the resource flow at the individual student level. This, however, was not possible as it would include long and time consuming observations, which would not necessarily result in many significant differences to the final results (see Thomas, 1990 and Fielding-who reanalysed the data collected by Thomas using multi-level analysis-, 1995). I made the decision to apportion the cost per individual student, assuming that there are not significant differences between the individual students of each group.
- It was obvious that there was not only one funding body in these schools and that not all financing agencies were the same across the schools. As a result, the payments were not carried out in the consistent or, even the same way, which might provide us with all the necessary information. This made any information collected via the school budget 'suspect' and only partly informative. Consequently, supplementary information on recurrent costs was collected from the head teachers and from informative talks with the secretaries or members of the parents committees.
- When I came to the stage of collecting information on the salaries of secretaries and other auxiliary staff I found out that a lot of help to these schools was offered voluntarily by parents or other members of the community, especially during the hours of the operation of these schools. I, therefore, had to decide to include

valuations of the time of the most significant of these auxiliary persons using the opportunity cost approach. This will be described in the section which includes the calculations of costs.

- Most of these schools rent buildings from the English educational institutions and thus pay no bills on fuel, water etc because these expenses are included in the rent. The church schools, that are, mostly, the ones which own their buildings, had no reliable information on the value of the buildings, the mortgage they pay and other expenses etc. These reasons made me decide to use the method of alternative rent to calculate the value of the buildings of the church schools, a calculation that will be consistent to the one of the rented buildings. That is, I valued the privately owned buildings using the price that they would have paid to a rented building from the council they are situated at. However, I had to make some adjustments regarding the quality or the 'stage' of the building.
- As far as the cost on equipment or libraries is concerned, my information from the interviews and my personal view through my visits to schools was that it was either non existing or negligible in most of the cases of the A-level provision and so I decided not to include it in my calculations. Some schools provided their students with free copies of the set books. Wherever this expense appears, I shall include it in the calculations, adjusting the figures for the different schools.
- The information on earnings forgone was collected as follows: the career officers in the councils where the schools are situated gave me information on the earnings of this age group and the unemployment rate as well. Since these students are of a varied

age I had to adjust the amounts. I included questions in the students questionnaire as to whether they would work if they were not doing this A-level. I shall report the results and decide for any possible adjustments for the different groups.

- The information on teachers' salaries was given by the following sources wherever each was applicable: the Education office of the Greek Embassy and the Cyprus High Commission, the School Records, the interviews with the teachers and head teachers. At the stage of costing the teachers time I faced the problem that different teachers were paid from different 'agencies' and not the institution itself (for example the teachers that belonged to the Greek or Cypriot delegations were paid by their governments). The main differences in their pay are: the teachers of the two delegations are generally paid more than the part-time teachers who are paid by the different committees.

I, therefore, had to make the assumption that the term 'institution', as far as the costing is concerned, refers to all these funding agencies that exist in this sector and carry out the payments that are included in the costing procedure. In the discussion of the results of this study, I hope that more light is thrown in this field of inquiry. Where it was considered necessary and if that was available, I used more than one source of information believing that double checking made data more reliable, given the idiomatic running of these schools.

6.2.3. The collection of data on the cultural aim of these schools.

As already stated, I had planned a conversation in groups of students, one group of students for every type of providers. More details on the

procedure and the setting up of the groups is given in the section of the analysis of this data as this is considered more appropriate for this piece of analysis.

6.3. Description of the sample, graphs and tables.

6.3.1. Description of the sample

In this section I describe the sample of the students of these schools as a whole at first and then group them according to their provider (type of school). I present information on their personal and family characteristics, that is the composition of the sample by age, sex, father's and mother's job and education etc. This description mainly throws light on the SES of these three groups of students, a variable that is considered important in effective school literature (Coleman et al, 1965, Mortimore et al, 1989). As McPherson (Education Economics, Vol.1, No 1, 1993) states in his article on 'Measuring Added Value in Schools':

'It is not sufficient to adjust outcome scores only for pupil's prior attainment.
Outcome scores must be open to adjustment for other non-school factors that boost or retard progress... The case for adjusting for non-school factor... can not be disregarded by anyone who believes that a pupil's progress will be benefited from the informed involvement of parents, or by anyone who believes that successful examination is the partnership between teachers and others'.

Before presenting the findings from the sample of students I shall describe the way I tested for any significant differences between the A-level results of the two groups of students of the 1994 and 1995 cohort: I entered the year cohort as a dummy variable in the regression model which I designed for the A-level score and I describe in the last

section. The coefficient of this variable was insignificant. I therefore made the decision to use these two samples as one.

When I describe the findings I do not go into a detail account of the reasons I included them in my design. These reasons are explained in the chapter on methodology. Only when necessary some additional comments are made. The findings are presented for each individual characteristic. Firstly, the distribution of the characteristic in the whole sample will be demonstrated, and then the distribution by provider. At this stage, any statistically significant differences of the distribution of the characteristics amongst the providers are tested. The test used is the Chi square which is appropriate for all types of data included in the analysis. The results of the chi square test will be reported and commented upon for each individual case. Graphs of the distortion of the variables by provider (as the test was not reliable for the schools-the numbers of cells with frequency less than 5% was large) will be presented only if the results of the chi square test are significant. The variables with significant differences amongst the three providers are then tested for their effect on the A-level performance of the students. Still, if their effect is not independently significant, it could be that these variables count for the differences in the A-level results amongst the three providers.

- The sample by gender mix

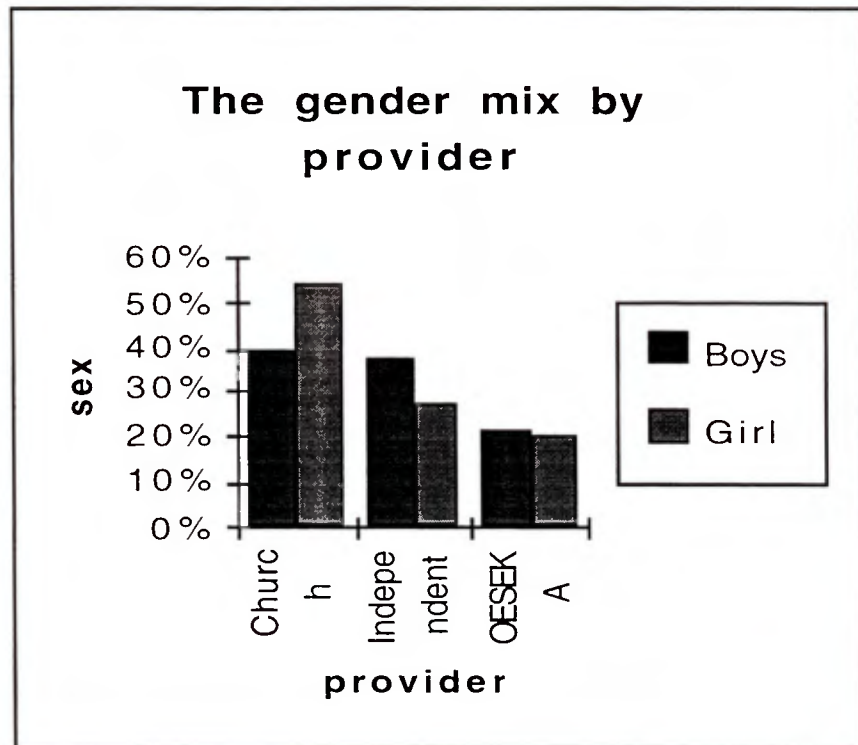
The gender mix of the whole sample has the following distribution:

TABLE 6.1.: The Gender Mix of the Sample (No=202).

SEX	MALES	FEMALES
Percentage	61	39

This distribution of male and female students in this sample can not be considered unexpected as, during my visits to these schools I noticed a difference in the numbers of the two sexes in the A-level classes . It could be interesting, however, to see whether there is a different distribution of gender amongst the three providers of this type of education. The graph below shows the sex participation in the three types of providers. One could easily see some differences in the gender participation rate: The church schools have the higher proportion of females and the Independent schools of males. The OESEKA schools have got almost equal proportion by the two sexes. The chi square test on the gender mix by provider showed that these differences on the gender distribution amongst the providers are significant. This means that they are likely to appear in the real population.

GRAPH 6.1: The gender mix by provider.



- The distribution of the sample of students by age:

The issue of age distribution could be an interesting one for policy makers if it was found to be a factor in the effectiveness of this provision. The students in the G.S.S. do not, generally, take their A level exams at the age of eighteen, with other A-level subjects. It is perceived (memos of EFEPE, 1995) that the students who take A-level Modern Greek in G.S.S. should take their exams at least one year earlier. Thus, these students might have the opportunity to spread their reading

time more effectively among their other A-level subjects during the last year. This, however, had led to the extreme case of having students taking this A-level at the age of sixteen, or even earlier.

EFEPE, the coordinating body of the G.S.S., has influenced the policy of the schools in this matter and the age of entering the exams has been gradually rising. This is happening probably because people involved in this provision have come to believe that the students of the age below sixteen were not mature enough to fully understand and respond to questions on literature at this level (memos of the meetings of EFEPE, 1992). Questions in the students questionnaires concerning their A-level exams offered additional information on this point showing that these students still take the A level Modern Greek exams earlier than their other A level exams. More particularly: 60 % of the sample stated that they were taking the other A-level subjects exams in the following one or two years.

The distribution of this sample by age is:

TABLE 6.2.: The sample by age (No=202)

AGE	15	16	17	18
Percentage	4	41	32	23

One could comment that the main difference in the age distribution is

that the Independent schools have got a small number of fifteen year olds. It seems that the range of the other age groups is quite similar in the three types of providers. When I investigated for significant differences in the age distribution amongst the providers, the chi square test showed that these differences are not significant. At a later stage I shall test whether there are any significant differences in the performance in the A-level examinations of the different age groups by provider. The results of such an investigation may provide us with some policy issues of interest to policy makers.

- The sample by country of birth

I explained in the methodology chapter why I included this information in my design. As far as this piece of information is concerned, a very large percentage of the sample were born in England.

TABLE 6.3.: The sample by country of birth

COUNTRY	U.K.	GREECE	CYPRUS	OTHER
Percentages	95	2	2	1

If we see the cross-tab graph of the country of birth by provider, which appears Appendix 6.1, we note that all the students in the Independent and OESEKA schools were born in England. The small numbers of students that were not born in England seem to attend the Church schools. Further investigation on any significant impact this might have

on the exam results will be sought in a section below. It might, however, be worth noting that the above observation concerning the pupils which come from Greece and Cyprus attending the Church schools, could worth further investigation from a sociological aspect, although the chi square test gave no significant value for these differences.

- The sample by religion

The great majority of the sample (93.5%) are Greek Orthodox, 3.5% are Jehovah Witnesses and 3% are Catholic. There appear to be differences between the three providers in the distribution of this characteristic. These differences appeared to be significant in the test. This means that the students of religion other than Greek Orthodox are likely not to attend the church schools.

-The sample by years they have been living in England

This question aimed to find out the proportions the population of these school that were born in England, Cyprus or Greece and tackle any differences amongst the providers and schools. The study then examines the significance of any possible differences to the effectiveness of these schools.

A large percentage (93%) stated that have been living in England for more than 15 years. 2% wrote that they have been in England for 11-15 years, 3% for 6-10 years and 2% for 1-5 years. The distribution of the answers to this question by provider is seen in the graph in Appendix 6.2.. The differences that appear are not, however, significant. This means that the distribution of the students by years they have been living in England amongst the three providers in the real population in

not different.

-The sample by parents' place of birth

It has already been mentioned that these students are of Greek origin and the vast majority come from Cyprus. This is revealed in the questionnaires where most of the students stated that their parents come from Cyprus. Some have either parent from the Greek mainland, less from England or from another country. This finding shows that the students that took the exams in 1994 and 1995 are 'first immigrant generation', something to be used in the discussion of the results.

What appears interesting in the distribution of this variable amongst the three providers is that the Independent schools have got the greater variety as far as the mother's place of birth is concerned. The distribution which concerns the father's place of birth is similar. The differences by provider proved to be significant through the chi square test. So, in the real population, mothers of other origin would prefer their children to attend the Independent schools.

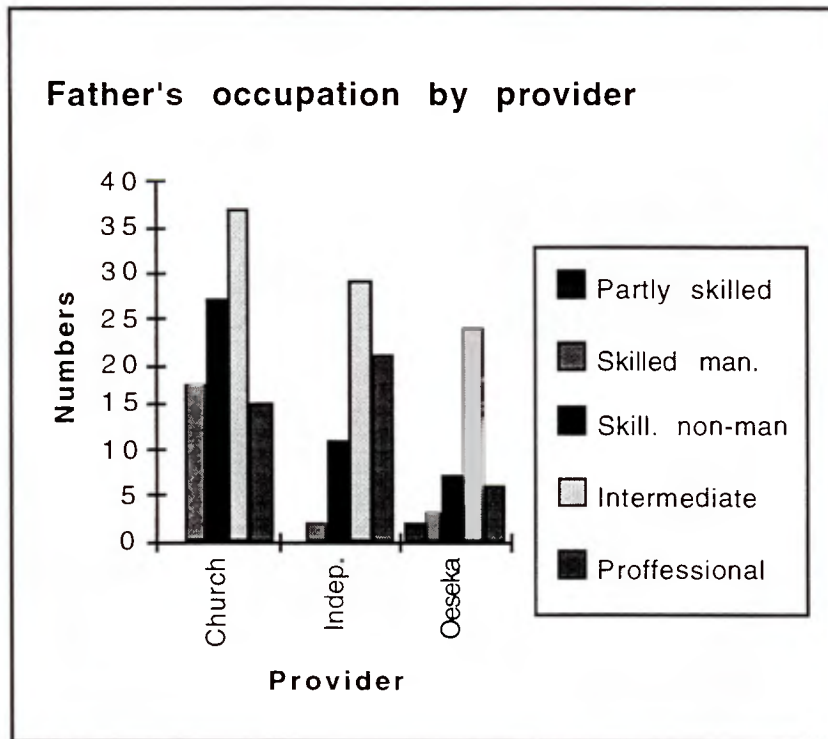
- The sample by father's occupation

This variable is considered important in the effective school literature as it is quite important in describing the students' SES. This variable alone, however, cannot usually determine the SES of a sample. More work on this data will be done in the later analysis. The job of the student's parents was given the number 1-6 according to the group of occupations it belonged to. The occupations were grouped in the same way they are in the ALIS project, from the low ranking, non-specialised occupations to the higher ranking specialised ones.

The distribution of the students' fathers' occupations is slightly skewed towards the high ranked occupations. This may be due to the type of ranking used, or to the fact that the students who take the A-level Modern Greek are likely to have fathers with high ranked occupations. A cross-tab graph of the father's occupation by provider was also produced. This shows a different distribution of this variable in the three providers which proves to be significant in the chi square test.

The OESEKA schools seem to be the only ones who have partly skilled fathers, while the church schools have the large majority of skilled manual fathers. The distribution in church schools is in a descending order, while in the Independent in an ascending one. The distribution of the fathers' occupations in OESEKA schools shows high numbers of Intermediate occupation fathers. It seems interesting that the Independent schools have the highest number of professional fathers.

GRAPH 6.2.: Father's occupation by provider



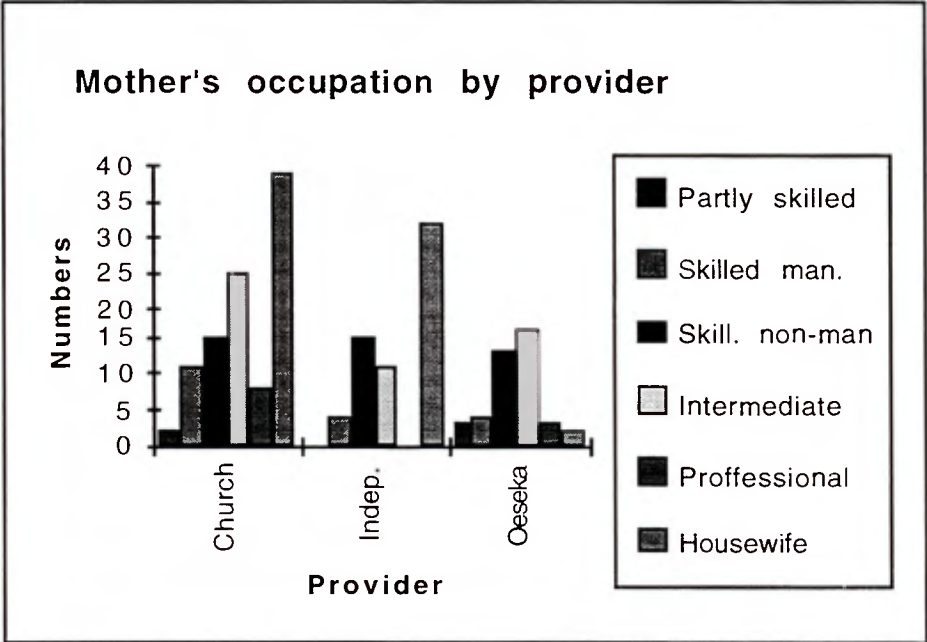
- The sample by mother's occupation

This variable adds more information in the field of the SES of the students. Something to note is that 37% of the population's mothers are housewives which excludes them from the ranking used and makes further analysis problematic. The distribution of the occupations is also skewed towards the high ranked occupations.

The mother's occupation by provider is presented in the graph below.

Again one can see a different distribution of the occupation amongst the three types of providers which, again, is significant (chi square test). It appears that the church schools have got the highest numbers of mothers who are housewives, but the Independent schools have got the highest proportion of the mother's in their schools being housewives. There are other interesting observations but for this analysis we shall stick to what appears relevant to the effectiveness of these schools. This will be elaborated on later in the inferential statistics section.

GRAPH 6.3.: Mother's occupation by provider



- The sample by father's and mother's education.

It is, sometimes claimed in the effective schools literature that the variable of father's education could be used as a proxy for the SES of the students (Thomas, 1990, p 89). The table below shows the distribution of these variables of fathers' and mother's occupation in this specific sample. Later, on the analysis of the sector as a whole, I shall comment on the relevance of this measure for the SES of the students. An abstract from an article on 'Measuring Added Value in schools' (McPherson, A., 1993) shows the importance of these variables on the students' progress:

' Also correlated with progress are the characteristics of a pupil's household. These include: household size and adult composition; the educational level the parent or parents; and the parents' occupations'

TABLE 6.4..: The sample by father's education in percentages(n=202)

PROVIDER	CHURCH	INDEPENDENT	OESEKA
Primary (%)	2.1	1.0	1.6
Secondary(%)	23.0	12.0	9.4
Higher (%)	22.5	18.3	7.3
Other (%)	1.0	0	0

Missing observations :11, Unemployed :4-2.1%-(all in Church school

The chi square test on the above cross-tab did not give significant values.

TABLE 6.5..: The sample by mother's education in percentages(n=202)

PROVIDER	CHURCH	INDEPENDENT	OESEKA
Primary (%)	6.5	3.0	5.0
Secondary(%)	24.0	18.5	12.5
Higher (%)	17.5	9.5	3.0
Other (%)	0.5	0	0

Missing observations: 3

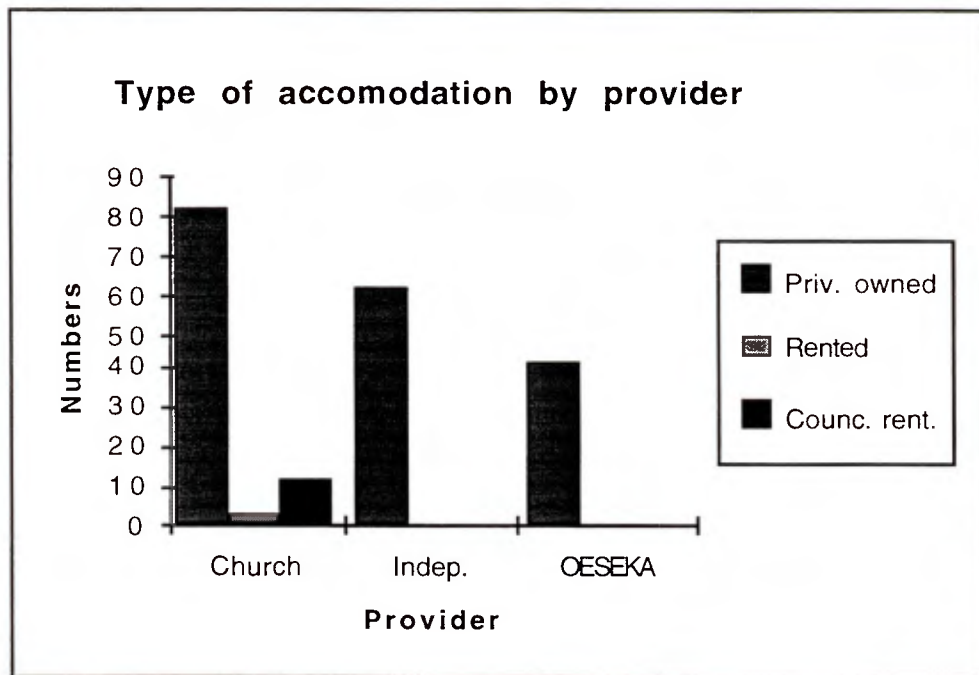
The distribution of this variable amongst the three providers does not appear to be exactly the same. It would, however, be of interest to find out whether the different distribution has got different impact on the effectiveness of these groups of schools. The answer to this question will be sought in the section on differential statistics. For the moment, one can firstly comment on the fact that the mother's with secondary education seem to be the larger proportion. Secondly, it appears that the Independent schools have got the lowest numbers of mothers with primary education only. The chi square test found significant values for the differences of the distribution between the three providers. It means that the distribution of the mother's education in the real population is likely to be the same, as opposed to the distribution of

the father's education which is likely to be due to chance.

- The sample by type of accommodation

It is interesting to note that 91.6% of the sample live in privately owned houses, 1.5% in rented houses, 5.9% in council rented ones and 1% in some other type of accommodation. In the distribution of this variable by provider, which is seen in the graph below, it seems that the church schools are the only ones which have a wide range of types of accommodation. The sample of the two other types of providers all live in privately owned houses.

GRAPH 6.4.: The type of accommodation by provider



There seem to be significant differences in the type of accommodation the students of the different providers live in (chi square test). This means that the students of the three providers in the real population are likely to have a similar type of accommodation to the students' of the sample. In this case a small percentage of the the students in church schools are likely to live not in privately owned houses.

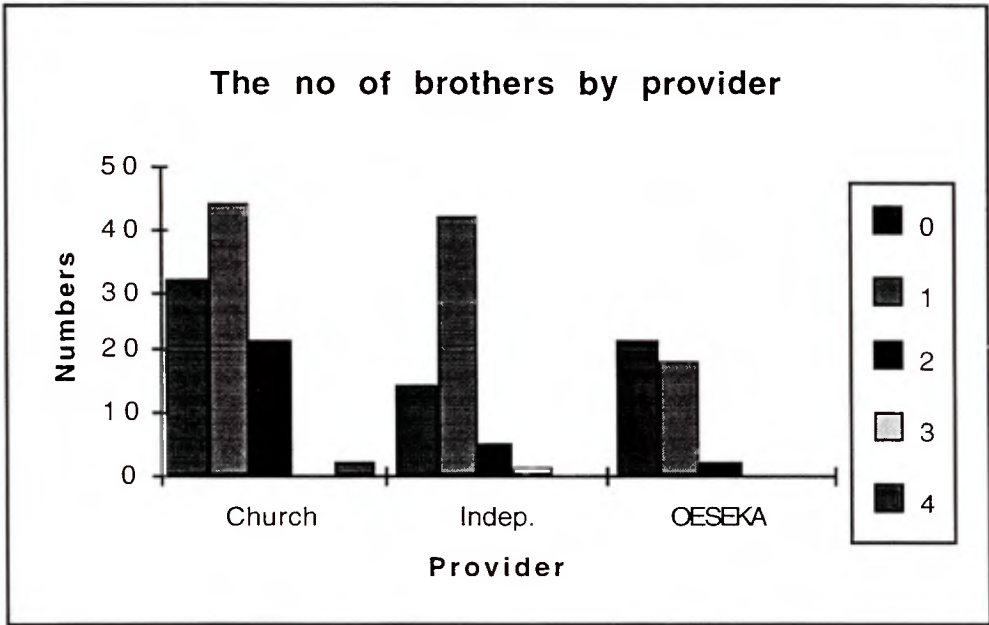
- The sample by family composition

The family composition was examined in studies of school effectiveness and mostly the turn of the students among their brothers

or sisters (Leonard, D., et al, 1990). The information I got refers only to the number of brothers and sisters the students have. These numbers are examined separately as this makes the analysis of their effects much easier and more specific.

The picture we have in the first group of data is quite interesting showing that the majority of the population have no brothers. This variable shows a different distribution amongst the three providers. Again, I shall investigate the significance of these differences in the performance of the relevant populations in the exams in the chapter of inferential statistics.

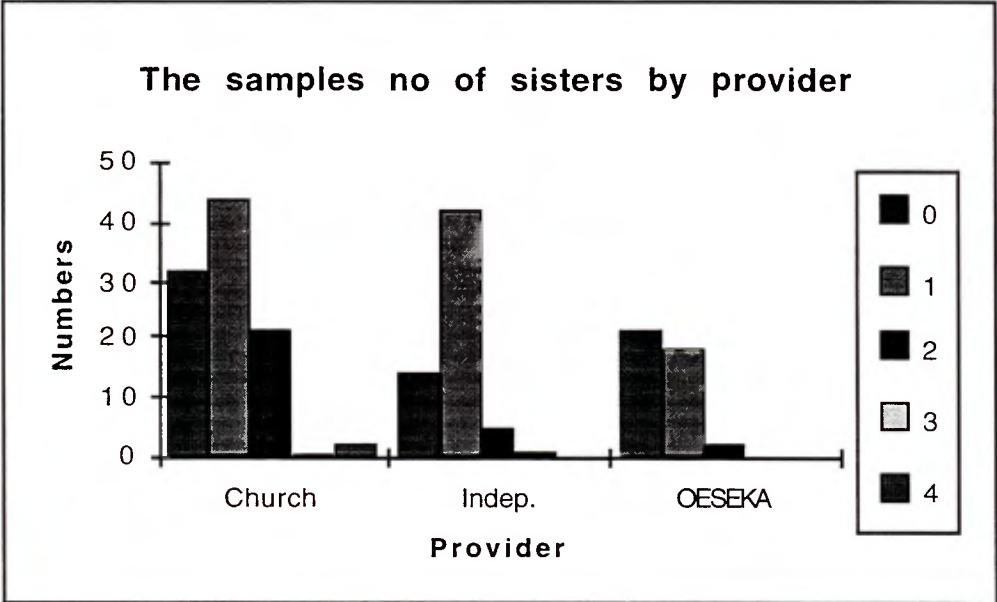
GRAPH 6.5.: The sample's number of brothers by provider



The differences in the distribution amongst the providers appear to be significant.

As far as the number of sisters is concerned the picture is slightly different as the majority of the population have got one sister, this making the distribution of this variable less skewed. The distribution by provider is quite similar to the one of the no of brothers. These observations could be interesting from a sociological point of view, but, as far as this investigation is concerned, it is these variables' impact, if there is one, on effectiveness that is of interest.

GRAPH 6.6.: The number of sisters in the sample by provider



These differences by provider are found to be statistically significant (chi square test). The real population then is likely to have similar

distribution in the numbers of sisters and brothers they have.

- The sample as repeaters or not

The relevant literature often uses this variable as a measure of the school outcomes. An effort was therefore made to find out whether the students in this group were repeating the class and if so why. Additionally, this could offer some information to the cost side of this study as well. 15.8% of the students were repeaters saying that they wanted to improve their grade, or that they did not feel ready to take the exams the year before or that they had come from other schools and were repeating the class . This last proportion of students, however, had come from schools that used to run a two year A-level course. We will find out in the next section whether this significantly affects A-level performance

TABLE 6.6.: The proportion of repeaters in the sample

Repeaters			*	Non repeaters		
15.8%				84.2%		
Church-	Indep. -	OESEKA	*	Church-	Independent-	OESEKA
7.4%-	2.5%-	5.9%	*	42.6%-	28.2%-	14.4%

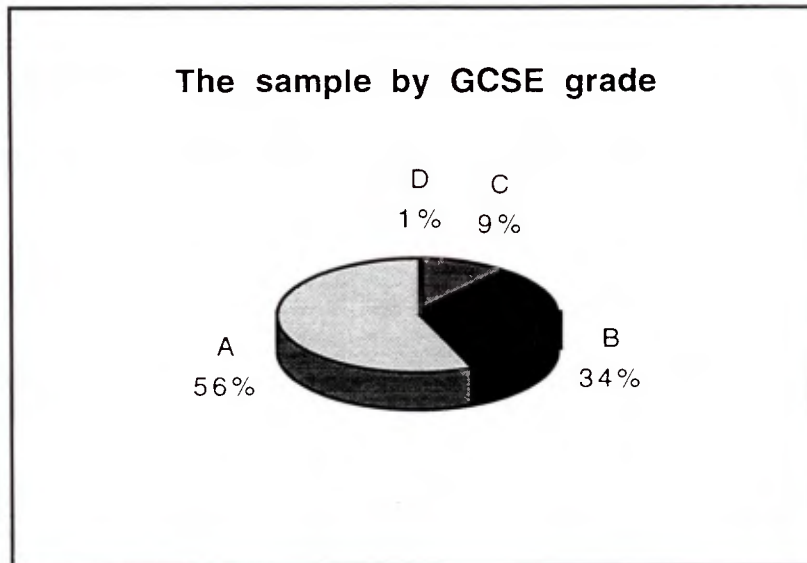
As far as the distribution of the repeaters amongst the three providers is concerned, it appears that the church schools have got the larger proportion. It must be mentioned, however that 30% of these repeaters

had come from schools that ran a two years course, so they can hardly be considered repeating the same class. These differences, however, are statistically significant by provider. This means that it is likely, in the real population, that the students who are repeating the class are doing so in the church schools. This, if the inferential statistics agrees, might mean that the students consider the church schools more effective.

-The sample by GCSE grade

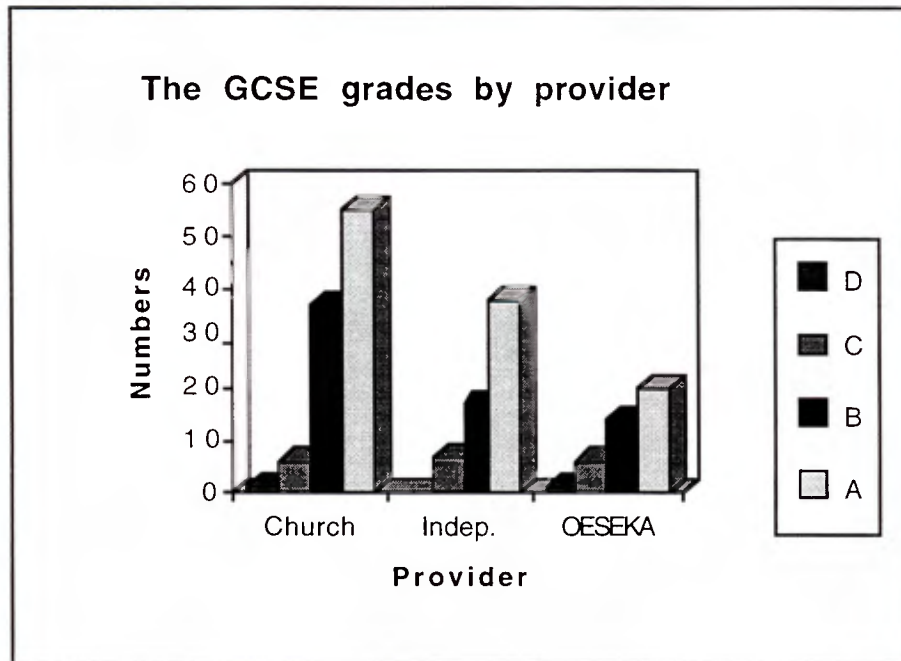
It is frequently claimed (Thomas, S., 1990, DfE, 1995, 'Value Added in Education) that the GCSE grade can be used as a proxy for the students' personal characteristics, previous attainment and ability. As the DfE above claims (ibid) : 'Research shows that the best single predictor of performance at GCE A/AS level is the student's prior performance at GCSE'. This study uses the GCSE grades of the students in the sample as one 'measure' of the intake. Other variables for the SES of the students will also be used (see McPherson, 1993). The frequency charts below show that the range of the results is between 5-7 (grades A-C) which is quite high and the frequency of 'A' (56%) and 'B' (34%) results is the highest . In a following section we shall try to find the correlation between the GCSE and A-level grades and run a regression in an effort to find out the relationship between these two variables and how these relationship is affected by the other variables of the model.

6.7.: The GCSE grades of the sample



The graph below shows the the GCSE grades of the students by provider. The distribution is skewed towards the high grades in all three providers. There are, however, some differences in these distribution within each provider. The OESEKA and Church schools have got only one case each with a D grade, while the Independent schools have not got any. The church schools then have got a larger proportion of B grades than C grades and this cumulative proportion is higher than in the other two types of providers.

GRAPH 6.18.: The students' GCSE grades by provider



The differences in the GCSE grade by provider are not statistically significant. This means that the real population is not likely to have differences in their GCSE Modern Greek results by provider when they enter the A-level course. As a result, any differences in the A-level scores between the three types of schools are likely to be due to other factors than the GCSE grades.

6.4.: The Data on Costs: Analysis and Calculations

6. 4.1.: Institutional Costs

The calculations on institutional costs come in three sections: the one on recurrent costs, the one on teachers' salaries and the one on capital costs.

Recurrent Costs

This type of costs includes all kinds of direct costs that occur in the running of these schools. Having in mind the grouping of Thomas (1990) and Stone (1994) I included the following costs which are relevant to this type of provision:

- the telephone costs
- the postage costs
- the photocopying expenses
- the salaries of secretaries and other auxiliary persons.

The expenses on bills for fuel, water, etc and on cleaners will not be included in this section as they are calculated in the 'alternative rent' calculations of the building expenses.

The information on this item was collected from school records and from the interviews with the head teacher and other members of the staff.

Telephone costs

The telephone bill could not be a good guide on its own, as it included the cost of all the calls that were undertaken by other members of the

community. I, therefore asked the head teacher for an approximate evaluation of the proportion of calls that concerned the school and then, more specifically, the A-level students . I also sought similar information from the secretary of the school. No specific information could be given about the calls for A-level students and so I proceeded on apportioning the amount that was given to me for the whole school. I calculated an amount between 15-30 pounds (depending on the information I received from each individual school). This amount was per student, for the three years of this provision and in prices of December 1994.

Postage expenses

The information on posting expenses was more specific as it was available per student, per year, in most schools. This amount, in the same prices and for the same period again varied between 15-30 pounds.

Photocopying

The information on photocopying expenses was available for the whole school. We, therefore had to collect additional information on the number of copies the students of A-level get on average. This piece of information was usually available from the head teacher as well as the cost of each copy. I included the photocopying cost for the school magazine and for the school announcements and calculated the cost per student for the three years of this provision which varies from £150.00 to £ 200.00.

Secretaries salaries

In every school I sought to find out the proportion of the time that the secretaries spent on the school activities. In some schools the information was that, at least half the time of one secretary was spent on school related activities, although there could not always be drawn a line between the community and school activities. In other schools I was told that the secretary worked during the hours the schools were run. I informed my investigation on this matter through information collected from different sources formal and informal. I, finally calculated the gross salary of a secretary accordingly and for the three years of this provision in prices of December 1994 and then apportioned it for the A-level students. This amount per student ranged 50-100 pounds.

Auxiliary staff salaries

At least one person offered help during the operation of most schools. I used the opportunity cost approach in calculating the cost of this person's time, that is the earnings forgone approach, and then I apportioned it for the A-level students. I used data on employment for this age group from the career officer in the local council. I had information that there always existed such a person offering voluntary work during school working hours, so I calculated the sum for the whole three years of the provision, per A-level student. The amount was between 15-35 pounds.

I then added the relevant numbers for each school to calculate the recurrent cost.

The cost of the Teachers' Salaries

The level of the teacher's salary was usually available from the school records . They were paid per teaching hour and thus the calculation of the cost per student was rather easy. I also collected information on the teachers that each group had the previous years and their wages. So, I proceeded to the calculations of the cost of teachers' salaries per student for the three years which ranged from 400-1250 pounds. The wide range of these amounts was due to the big differences in the wages offered in the three types of school. Then there were also differences in the group size and the teaching hours per week which were most influential in the formation of the above figures.

In situations where we cost teaching programmes and the head teacher is given time off to use in the management and supervision of the school, we can apportion the cost of the amount of time that the principal spends for each student (Thomas, 1990, p. 76). The information on the salary of this specific head teachers was taken accordingly: from the Education office of the Greek Embassy, from the education office of the Cyprus High Commission or from the school committee. Having calculated the amount of time that the head teachers spent on management I apportioned it for each A-level student. Then, I went on to calculate the amount for all three years of this provision. I also got information on who was the head teacher had for all these three years and used this information accordingly. The amount per student for all three years ranged from 80-135 pounds.

The Cost of Buildings.

When the school was rented I used the information on the rent the

committee pays. When the school owned its building, as I have already explained, I costed its alternative best use (the opportunity cost approach) which is the amount of rent the owners would get, had they let this property. Information from the local education authority was that, in the last three years, under the L.M.S., the governing bodies of the schools in their authority would apply rent which ranged from 15-25 pounds per hour per classroom for their buildings (this cost included the cost of the hall and the office available, as well as the cost of the running bills and school-keeping). There are always problems in costing school buildings for which there is usually no reliable 'market' price available (Thomas, 1990, p.30). This piece of information can always be useful in giving the 'market price' of this building.

I used the figures which were relevant for each individual school after having spoken with the people involved, and calculated the cost of the buildings for all these three years in prices of December 1994 . Then, I apportioned this amount to find the cost per student. The amount was between 630-2100 pounds

6.4.2.: The Cost of this Provision per Individual Student

The final sum of the different types of cost described above will be the apportioned institutional cost for each A-level student. It should be adjusted for the number of repeaters. Consideration will also be given for the number of students that come from other schools.

I can comment a little on these findings saying that when the teachers salaries being being less than 50% of the total cost, are a bit low. In the international literature (Psacharopoulos and Woodhall, 1985, p.121) we usually see that the teachers salaries represent between 60-70% of

the total costs of schooling. More light might be thrown to this point during the discussion of all the results.

6.4.2.: Individual Costs

In this piece of work we collected information on the earnings forgone following the procedure I described in the methodology. I also tried to collect any information available on other expenses that the students bear to attend this provision, such as books, transport etc and, of course, included the fees they pay. Most students, in informal talks I had with them said, that they did not have any additional travel expenses either because the school was close to their house, or because they used the travel card which they had already got. As far as the expenses on books is concerned, the information is quite different in each school. In the school under investigation the students in some schools had to buy at least two textbooks every year. In other schools the students were given the books by the school and had to return them afterwards. The institutional and the individual costs were adjusted accordingly.

Earnings Forgone

The earnings foregone data was calculated for the amount of 3.60 pounds per hour adjusted for the level of unemployment of this age group which I got from the employment officer of the councils . The adjusted amount was then multiplied by the numbers of hours per week and the number of weeks each student over sixteen was attending these A-level classes. The cost was calculated per individual student and entered as a variable in the data spreadsheet of this school.

A comment, however, must be made on the importance of this variable in this specific study. The information collected in the questionnaires was: only 10% of the students in the sample would have been in employment had they not been in these classes. Most of them said that they are fully financially supported by their parents. Considering the above information one could think that the earnings forgone cost should not be high amongst these students.

We can, however add the following important information which must be taken into account as well: i) in the individual cost calculations the cost of the family can be considered as 'individual' and its costing can be made using the opportunity cost approach, ii) in many studies (Psacharopoulos and Woodhall, 1985) the costing of the time that the individuals spend in school is done whether these individuals would alternatively have been in employment or not. This is justified by the fact that these individuals give up their leisure time to participate in these classes. In the analysis of the open-ended questions it was obvious that these students highly value what they forgo to attend the A-level Modern Greek course.

Having the above in mind and considering the fact that these students attend the Modern Greek classes on the evenings of the weekdays or on Saturdays, giving up much of their leisure time, I decided to calculate the earnings forgone the way I suggested above and include the amount in the calculations of the cost. This amount was between 35-400 pounds per year for every student

Fees

As far as the fees are concerned, the amount payable to schools, in prices of December, 1994, the amount ranged from 150-250 pounds per

year.

Other Expenses

The cost of the textbooks and other material was also calculated per student and according to the information I got. It was also adjusted for students who came from other schools. The above numbers were added and added in the SPSS file as a separate variable.

CHAPTER SEVEN: Findings from the Questionnaires and interviews

7.1. : Introduction

Descriptive statistics is firstly used to present the findings in the students' and teachers' questionnaires as well as the findings of the interviews with the head teachers and teachers. This section of the analysis is informative on the process variables used in the model and the output measures as well. In the description of this data, means and frequencies and other measures are calculated and presented in charts. An effort is made to include descriptive and informative data from the interviews with the teachers and head teachers and compare it to the students' data.

At this stage descriptive statistics is used to present the A-level results of the students in the sample and calculate the distribution statistics for this variable. Having done that, appropriate tests are used to identify any differences or relationships between the input and process variables I had included in the model and the raw A-level results. An effort is made to run a multiple regression for some variables in chapter eight. The aim of this type of analysis will be to explore the relations between the parameters themselves as well as the relations between the parameters and the real population under study. The cost variable is also entered in the regression model to help us find the relationships between the parameters on school effectiveness and the cost itself.

More specifically, descriptive statistics is used in this chapter to present and describe the data:

- 7.2. From student's questionnaire
- 7.3. From the interview with the teachers
- 7.4. From the interview with the head teachers
- 7.5. From teacher's questionnaires

7.2. Information from students' questionnaires

This information was grouped as follows:

- i. Data on process related variables
- ii. The findings in the attitude scale
- iii. Output related findings

7.2.1.: . Data on process variables

- The sample's description of their parents relations to school

The relevant question aimed to collect information on the number of times their parents visited school and why. 14.9% of the sample answered that their parents do not visit the school, while the rest stated the frequency of 3-5 visits per annum by their parents who mainly wanted to ask about their progress. We shall use this information in the discussion of the results and in combination to the other answers which concern the reasons they are doing this A-level etc. The aim of this contrastive analysis will be to examine the extent of the influence that the parents have on the student's decision to take this A level as well as on their achievement. More on this issue will be written in the discussion of the results of this contrastive analysis.

The table below shows the times per annum the students in the sample stated that their parents visited the school.

TABLE 7.1.: Times parents visited the school (average)

No of times	Church	Indep.	OESEKA
0	13..... (6.4%)	3..... (1.5%)	14.....(6.9%)
1	7..... (3.5%)	8..... (4%)	4..... (2%)
2	35..... (17.3%)	9..... (4.5%)	6.....(3%)
3	28..... (13.9%)	11.....(5.4%)	7..... (3.5%)
4	7..... (3.5%)	6..... (3%)	6..... (3%)
5	7..... (3.5%)	23.....(11.4%)	4..... (2%)
6	2..... (1%)	0..... (0%)	0..... (0%)

The above results by provider make some comments obvious, though not their significance, if there is any to the exam results. Since, however, these results are significant by provider, they may contribute to differences in the performance of the students of the three types of schools. Such comments might be:

- The most normal distribution appears in the church schools
- The independent schools seem to have the highest numbers of parents who visit the school regularly (This was spotted during my visits to these schools as well)
- The OESEKA schools appear to have the highest numbers of

parents who do not visit school.

The answers to the question 'why your parents visited the school' were equally distributed amongst the providers. The choice the students had was: to ask about my progress, to attend a celebration, both, or for any other reason. 40% of the sample answered that their parents visit school to ask for their progress, 20% to attend a celebration and 35% for both reasons. The rest 5% who answered for other reasons explained that their parents were either members of the school committee or doing some other job for the school.

- The students' view of their nationality

This question was given to the students for reasons explained in the methodology chapter and will mainly be used in the investigation carried out for the cultural aim of these schools. It will also inform the chapter on the discussion of the results.

The choices the students had in this question were: Greek Cypriot, Greek, Native English, Other. The majority of the students in the sample considered that their nationality is 'Greek Cypriot' (73.3%). A proportion of 8.9% thought of themselves as 'Greek'. A percentage of 12.9 said that they are native English. A small proportion of 5% thought of themselves of different nationality of the above. The distribution of the answers to this question by provider seems to be significantly different. Whether this difference affects the A-level results significantly it is explored in the section with the inferential statistics. The students in the church schools appear to give different answers to this questions to the answers that the students in the other two providers do. Their answers are towards the 'Greek Cypriot' answer.

- Why these students take the Modern Greek A-level

In this section I wanted to find out whether the usefulness of this A-level in the students future studies or in their future career was a factor in their choice to take it . As we know from the literature on educational productivity (Windham, 1990), the use of educational credentials as a factor in the students' future life, could be considered an outcome of the education process. At this point we could refer to Human Capital Theory which assumes that people invest in education for future monetary and non-monetary benefits. It will, therefore be interesting to see whether this sample of youths invested in their education this way. The large majority of the sample, 85%, stated that they would like to use this A-level to enter higher education. If we compare the answers to this question to the ones the students gave asked to mention the job they would like to enter, we can see a group with high aspirations wishing to enter highly ranked occupations. This is obvious in the teble below.

TABLE 7.2.: Reasons they take this A-level

Reasons	- Enter higher education	- Get a job	- For both reasons
Percentage	85	5	10

A look at the responses to this question by provider shows that there are more students in the OESEKA schools who want to use this qualification for both reasons. These differences on the distribution of the answers by provider are statistically significant (chi square test)

and this is likely to be the case in the real population.

Of course, the information I collected here can not answer the question whether this A-level is actually used by the students later on effectively. Additional information on this issue is sought in the interviews and the conversation undertaken with this group of students. Furthermore, I undertook a small study following a sample of thirty (30) students that graduated from these schools in 1993 in real life-in their studies and/ or employment and I tried to find out whether they had used the A-level Modern Greek as a qualification in their life after graduation. The sample of these students was chosen as follows: I got a list of the graduates and I randomly tried to conduct them through the telephone and get the piece of information I wanted. I, then spoke to their teachers about this to double check the information.

The results I got appear below in percentages and show that all these graduates actually used their A-level certificate in studies or employment. The ones who appear employed, got jobs within the Greek community in London, where the Modern Greek A-level is usually an essential certificate.

TABLE 7.3.. : Usefulness of this A-L in real life (n=30)

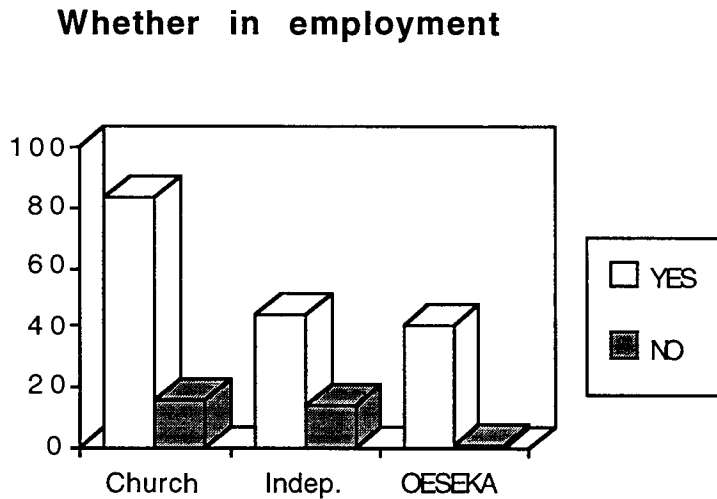
USE OF A-LEVEL	COLLEGE	UNIVERSITY	JOB
Percentages	40	50	10

- Present job related information

This piece of information will mainly be used in the earnings forgone calculations. Additionally, some articles (London Student, December, 5, 1993) comment on the influence of part-time jobs on their course performance. The findings in this study show a low percentage of students in part-time employment. Only 15 % of the students work part time. This may be due either to the young age some of them have or to the clear fact, as the answers in the relevant question show, that their parents support the 80% of them fully financially- the 17% of them partly and only the 3% of the students are not supported financially at all.

A large proportion of the sample (83%) do not work at all. The numbers of students who are/are not in employment by provider are presented in the graph below. All the observed differences are statistically significant (chi square test). Of course the number of students that are in employment are small, but still, one can comment on that the students in the OESEKA schools are not likely to be in employment as much as the students in the other two providers.

GRAPH 7.1: Whether the students are in employment or not



- Whether they think they would do this A-level elsewhere

The aim of this question was to collect information on the importance the students pay on the link between the Greek school as an educational institution and taking this A-level. This information is supposed to be related to the one on school and subject satisfaction which are generally found to be related to the effectiveness of a school (Rutter et al, 1979, Mortimore et al, 1989). It was interesting to see that 69.8% of the sample stated that they would have done this A-level elsewhere. This could probably mean that have got a very positive attitude towards the subject of Modern Greek A-level itself. This result is reinforced by the attitude scale results which show a very positive attitude towards this subject (see relevant section below). The distribution of the

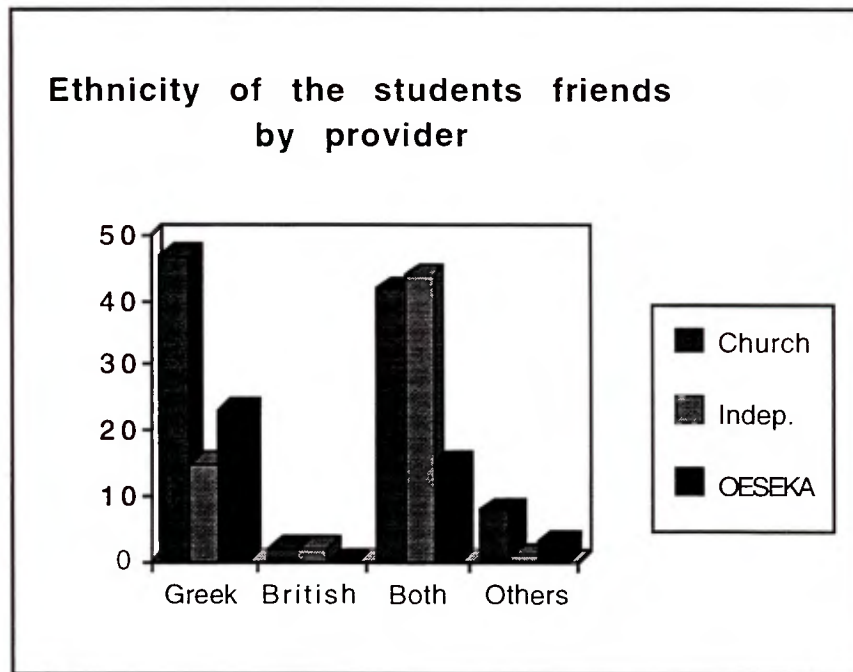
answers to this question by provider is not very dissimilar amongst the three providers but it has got significant values in the chi square test.

- Information on the ethnicity of their friends

This data is due to inform our investigation on the cultural aim of this school. The stated ethnicity of the students friends appears in the graph below in percentages. Half the students in the sample stated that the ethnicity of their friends is mostly Greek or British. A large majority of the rest, however, 44%, stated that their friends are mostly Greeks. A small percentage of 2% noted that their friends are British and a lower proportion of 1% stated that their friends are of other ethnicity.

In the distribution of the answers to this question by provider, it seems that the distribution in the church and the OESEKA schools follows a similar pattern, while the one in the Independent schools is different. More students in the Independent schools stated that their friends are both Greek and British, and less that their friends are only Greek. It also appears that the OESEKA schools have got the higher numbers of students stating that they have friends of other ethnicity. The chi square test showed that the differences in the distribution of the answers to this question by provider were statistically significant.

GRAPH 7.2.. : The ethnicity of friends by provider



- The students' view on the goals of this school

This question is related to the view that the more the students are informed and agree to the goals of the school, the more effective the school will be (Mortimore et al, 1989). The choice the students had as to which they consider an effective school was among 'one with good examination results', 'one with large numbers of students', 'both' or 'other'. 62.9% of the sample stated that they consider a G.S.S. effective when it has good examination results and 29.7% that an effective G.S.S. should have large numbers of students too. Only 6.4% stated that they

want an effective school to have other factors like a nice working environment and good teachers.

TABLE 7.4. : Which school students consider effective by provider

PROVIDER	CHURCH	INDEPENDENT	OESEKA
1.Results	58%	50%	70%
2.Student no	0%	0%	0%
3.Both	38%	47%	25%
4.Other	4%	10%	5%

KEY: 1: a school with good examination results, 2: a school with large numbers of students, 3: a school with both, 4: other

It seems that the answers of the answers of the students in the OESEKA schools have got a slightly different distribution. So, the students in the three types of schools seem to have different views on which school is effective which are statistically significant (chi square test).

- Students views on the homework they get from their Greek school.

Homework is considered an important factor in school effectiveness literature. These three multiple choice questions on homework sought

information on the hours the students spend on their homework, the frequency they do their homework and the reasons for doing it.

The average of the hours the students spent on homework is 2.37 hours per week, the median being 2 which suggests a quite 'normal' distribution.

The frequency by which the students do their homework in this sample varies from always to never on a five point scale. The results can be seen in the table below.

I also sought for the reasons they do their homework because I wanted to use this information (see the chapter on methodology) as an informative indicator of the 'willingness' of the students to attend this subject. I may then compare this piece of information to the one I get from the 'subject satisfaction' scale. The choice the students had in this question was 'because it is set by the teacher', 'because I want to', 'for both reasons' and 'for other reasons'. 32% of the sample stated that they do their homework for other reasons, these being in most cases 'to get ready for the exams'. 34% of the sample stated that they do it for both reasons and 30% said that they do it because it is set by the teacher.

TABLE 7.5.: Information on the homework from the student questionnaire

HOURS(per week)	*	FREQUENCY	*	REASONS FOR DOING IT	
				Because it is:	
One	18%	Always	27%	-set by the teacher	30%
Two	42%	Regularly	41%	-it is interesting	4%
Three	30%	Sometimes	20%	for both	34%
Four	10%	Never	11%	for other reasons	32%
		No answer	1%		

The distribution of these variables by provider appears to be different, but these differences are not significant.

-The frequency of attendance of the students in the sample

It is generally considered (Rutter et al, 1979, Mortimore et al, 1989) that the frequency of attendance is a factor to school effectiveness. This variable is often used as an outcome measure as well. The answers to this question were ranked from never to always on a five point scale. 63.4 % of the sample answered that they always attend their school, 37.7 % that they frequently do and the rest 2% that they often attend their Greek school. Information from the school records was consistent to these results: this group had a very small number of student absences . Also, both groups, the head teachers and the teachers, when interviewed, stated that there are no significant problems in the attendance of the A-level students. Those students that do not want to attend the course usually drop out within the first term. The differences of the distribution of this variable in the three type of school are not statistically significant.

-The job the students of the sample would like to enter

The reasons and the context of this question is explained in the methodology chapter. Students' expectations could be a factor to effectiveness. Furthermore, this information could add more information on the usefulness of this A-level certificate to the students' future life.

The grouping used in the coding is the same to the one applied coding mother's and fathers occupations. The answers were mainly distributed from non-manual skilled to high professional. The information collected on this aspect shows a group of high aspirations. There were, however, significant differences (chi square test) amongst the students of the three types of schools as far as the stated future job is concerned. The one which is obvious is that the students in church schools are mainly the ones who choose to enter manual occupations. The results for the three providers appear in the table below.

TABLE 7.6. : The job the students of the sample would like to enter

PROVIDER	CHURCH	INDEPENDENT	OESEKA
Unskilled manual	4.65%	2%	2%
Non-manual skilled	4.35%	1%	2%
Intermediate	15%	17%	25%
Professional	40%	40%	32%
High Professional	35%	40%	39%

- The expected A-level grade

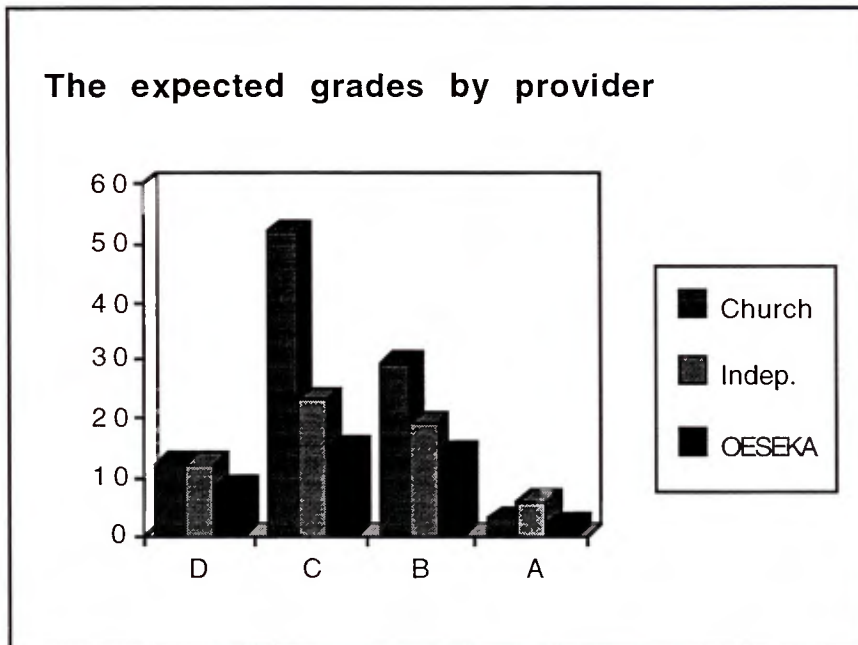
This grade is found to be positively correlated to the actual grade the students get (S. Thomas et al, 1994). It is stated that 'Studies show a strong relationship between high expectations and effective learning' (Myers, K, 1995, p.10). However, as in all studies which use regression, no causal relationship between the expected grade and the students' performance can be established. The distribution of the responses in this question is shown in the table below

TABLE 7.7..: Expected grades (n=202)

Expected grade	*	A	B	C	D
Percentage	*	5.6	31.6	45.9	16.3

The distribution of this variable by provider is presented in the graph below. There appear some differences in the expectations of the students which were found to be significant. The students in the church schools seem to have higher expectations about their grades.

GRAPH 7.3. : The expected grade by the students in the three providers



7.2.2.: The findings in the attitude scales

- Work (they get in their Greek school) satisfaction

A five point scale was used to measure the work satisfaction and five questions were grouped to do that. The numbers given to the questions were from 1-5. The distribution of this variable is towards the high satisfaction (over 17). The distribution of this variable by provider has differences which are statistically significant. The students of the church schools are likely to give higher scores (average 16), with the

students of the Independent schools coming second (average 15.5) in scores and those of the OESEKA schools coming third (average 14).

-The attitude of the students towards their teacher

The scale used in this question is similar to the one in the measurement of the previous variable. The distribution of the scores of the answers to this question is not very smooth, especially in the upper quartile. This study is mostly interested in the distribution of the answers to this question by provider and probably by school. The cross-tabulations by school gave cell frequencies below 5% a fact that made the results unreliable. The statistical test of chi square shows that the students in the three providers have got significant differences in their attitudes towards their teachers. One can note that again the scores in the church schools are higher on average (17,5). The scores in the Independent schools are slightly lower (17,2) and the scores in the OESEKA schools are the lowest (16).

- The subject satisfaction

The measurement of this attitude was done on the same scale. The range of the distribution appears wider and does not seem to be smooth in normality. The distribution of this variable by provider seems different. The students in the church school get slightly higher satisfaction on average (16). The students of the Independent schools get a bit lower satisfaction from their Modern Greek A-level subject. The students of the OESEKA schools report the lowest level of satisfaction (9). These differences amongst the providers are statistically significant (chi square test).

- The attitude towards the Greek cultural climate in the A-level provision

This attitude was measured in a similar way as for the previous variables. Having, however not had any similar scale of questions in mind from previous research, I had to create one and test it in my pilot study. The distribution of the variable in the sample is rather smooth. In the cross-tabulations, however, there appear to be differences especially in the higher quartile. The distribution in the church schools seems more normal than the one in the other two providers. Also, the average scores are higher in the church schools again (church=20, Independent=17, OESEKA=15). These differences are also found to be statistically significant.

- The discipline climate

The measurement in this variable was carried out in a different way to the previous ones: The number given is between 1-5 and it is the mean score of three questions related to discipline. The distribution of the findings in this question can be seen in the graph in Appendix 7... Most answers are distributed in the upper quartile, showing a rather positive view for the discipline. The differences are mostly in the skewness and the median. In the church schools the answers are distributed mostly in the upper quartile, in the Independent schools in the second quartile and in the OESEKA schools in the middle. The differences are statistically significant (chi square test)

I shall comment more on this point when I bring together the results from the different types of analysis. It is of interest, however, to say that neither the teachers nor the head teachers reported any special discipline problems in their interviews. Additionally, the findings in

the teacher's questionnaire do not seem to support the existence of severe discipline problems .

- The students' view on the academic climate in the school

This variable was given the score of the answer the students gave to one question with ranked answers. The answers of the students in the sample were distributed rather smoothly. The distribution of the answers to this question by provider does not seem to be very different. The chi square test showed that the differences that appear are statistically significant. It seems that the students in the church schools have got higher views on the academic climate that exists in their schools (average score by provider: 4.2-3.5-3.2.)

- The school satisfaction

The measurement of this variable is on the same scale as for the subject satisfaction. The distribution of the scores of the students is towards the higher scores. As far as the the distribution of this variable by provider is concerned, that in the first two providers looks more normal than the one in the third provider. The average scores are: church= 18, Independent= 16, OESEKA= 15)These differences are proved to be statistically significant (chi square test).

7.2.3.:. Output related findings

- The A-level grades of the students in the sample

The distribution of the grades in percentages is shown below.

TABLE 7.8: A-level GRADES (n=202)

A-level grade*	A	B	C	D	E	U
Percentage *	14	22.3	21.3	20.3	15.3	6.4

The distribution of the grades in numbers appears in the graph below. It is useful to present some measures of central density of this variable, which actually show that it is skewed towards the high results.

A-level grade

Mean= 5.61

Median= 6

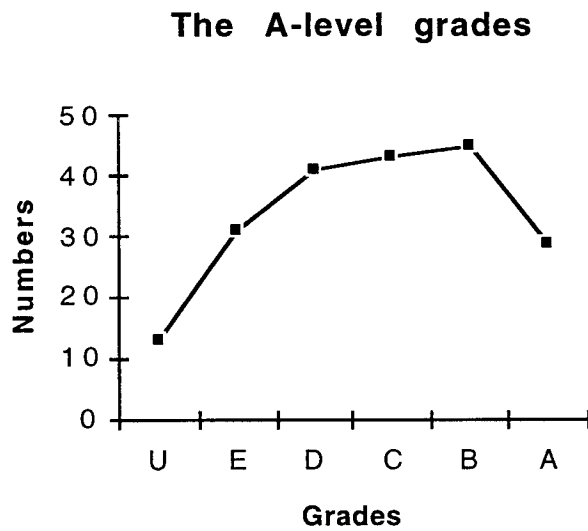
Mode= 8

Kurtosis= -.95 SE Kurt.= .34

Skewness= -.172

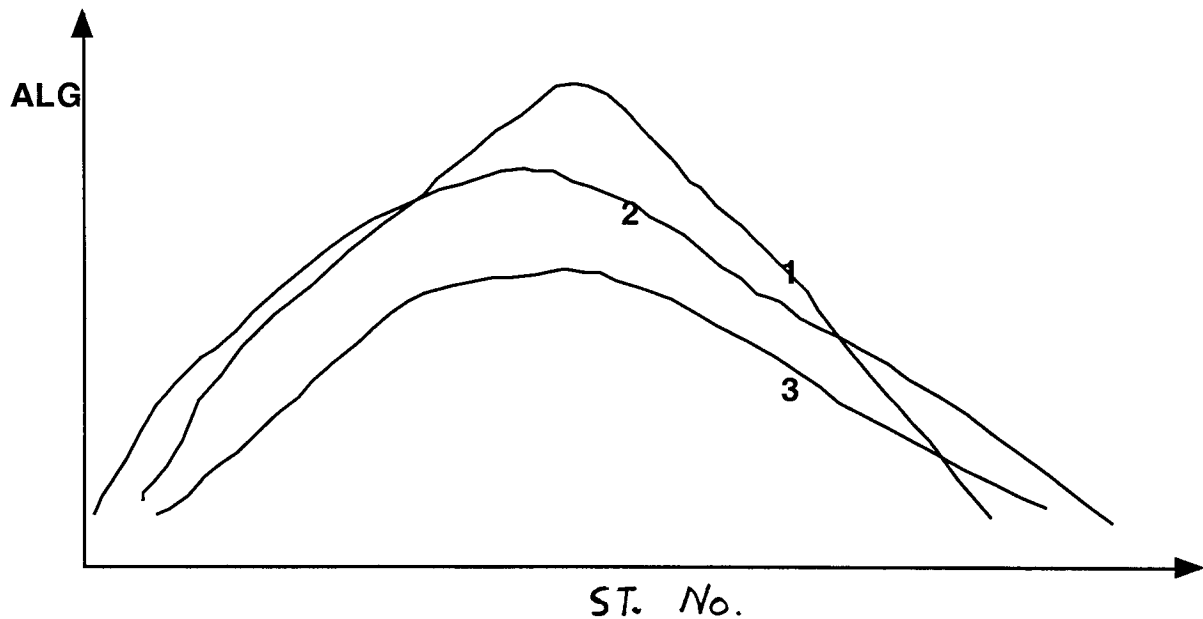
Skewe= .171 Sum= 1134

GRAPH 7.5. : The A-level Modern Greek grades of the sample (n=202)



There appear, however, to be differences in the distribution of the A-level grades by provider. This is presented in the next graph.

GRAPH 7.6. : The A-level Modern Greek grades by provider



These differences are statistically significant. This means that the students of the three providers are likely to perform differently in the exams (chi square test). The students in church schools are -on average- expected to perform better, with the students of the Independent schools coming second and those of the OESEKA schools third.

- The value added measurement

This will actually be carried out while using the regression model of statistical analysis. I shall firstly enter the students GCSE grade in the regression because it represents the prior attainment of the students. Thus, the contribution of any additional variable in this equation will be measured accordingly. It can be considered as a measurement of the progress of the students.

7.3.: The Responses to Open-ended Questions

The three open ended questions in the students' questionnaires were: 'what you like or dislike in your school', 'describe your ideal teacher' and 'describe your ideal school'. The main aim of these questions was to inform my study in general of the factors that may affect the students' performance and use the information I shall collect in the discussion of all the other findings. There are, however, some general comments which I can make at this stage while describing the findings. In this section I shall deal with each question separately presenting the main results and some representative quotes. Wherever applicable, I shall try to relate these results to any findings of relevant importance in the other types of analysis I undertook and mostly the attitude scale measurement and the cultural analysis.

7.3.1.: What Students Like in their Greek School:

The impression the answers to the first question (things you like or do not like in your Greek school) give is that students generally do not pay much attention to the school surroundings and 'things' they like or dislike in their school. Instead, they are very keen at having a 'good' lesson, doing their work, enter the exams and have the best returns they could get in their future life by having this certificate as an extra qualification. This can be easily seen in the following quotes:

'This (what I like or dislike) is not the issue. What I do now will affect my career'

'I come to Greek school to do my work, and achieve a good grade. The surroundings do not matter'

'I am not pinpointing any likes and dislikes as I have to come here and concentrate on my work as this will affect my future'.

The above message is clearly given by a large number of students in the sample (over 50). I shall now list of the items I coded that the students like in their Greek School. The numbers represent the number of the responses. In some cases the items were grouped for a better presentation. Below I offer a guide to the grouping used for coding in the next table. I also make some comments which may be helpful in interpreting the table:

TABLE 7.9.: What students like in their school (n=202)

PROVIDER	CHURCH	INDEPENDENT	OESEKA
Subject	40	10	5
Meet friends	65	25	10
Culture	60	20	8
Teacher	20	15	5
Organization	10	0	0

What Students Like in their School- Comments

1. *The subject they are taught* : In this coding I included responses which stated that they like the 'subject', 'Modern Greek language' and the 'literature books' they are being taught.

2. *The fact that they meet friends*: This was the most popular answer amongst all types of schools and will be used accordingly in the discussion concerning the climate and the culture of these schools.

3. *Some cultural related aspects*: In this coding I included responses

referring to 'Greek environment', 'Greek dancing', 'Religion-church', 'Greek history' and 'national-ethnic events'.

4. *The teacher:* Students from all types of schools and from different classes-not all of them, however, stated that what they like in their Greek school is their teacher. This answer can be related to the measure of 'the attitude towards the teacher' in the discussion of the results.

5. *Some organisational issues:* The grouping in this response included those answers mentioning that they like some organisational aspects of their school. In most cases the students compared their school to the other G.S.S. finding it better in this respect. This happened in the case of one school only by ten people.

7.3.2.: What Students do not Like in their Greek school:

The table below shows the findings which relate to the second part of the question. These are also followed by some comments.

TABLE 7.10.: What students do not like in their school (n=202)

PROVIDER	CHURCH	INDEPENDENT	OESEKA
Work	12	4	5
Time	35	25	10
Nat.&Rel.	12	4	0
Organization	12	2	5
Fees	4	2	2
Building	4	0	0

What Students do not Like-Comments

1. *Work:* A number of students mentioned that they do not like the work they get either at school or at home. A small number of students of one class reported that they do not like the fact that they have little homework.

2. *Timing of the lessons:* In this coding the responses firstly included the time at which the lessons take place. It is either on weekdays evenings or/and Saturdays. The coding also included responses on the number of hours they are taught. Another fact the students do not like as far as the management of their school time is concerned, refers to the short breaks the students claim to have. This comment was made by the students of one type of schools (the church schools).

3. *Overemphasis on nationalistic and religious issues:* A number of students from all providers said that they do not like too many nationalistic and religion aspects which are sometimes pursued. A small number of students in the church schools stated that they do not like the fact that there is not more 'Greekness' or 'orthodoxy' offered in the school. This coding is grouped into two small groups expressing these contradictory views. Also counted in this coding were some answers stating that they do not like participating in all the school concerts.

4. *Organisational issues:* This group of answers firstly includes the responses which were against the school rules. It also includes an issue in the behaviour of the Head and the teachers the students do not like: they treat them as kids instead of grownups. A very small number of

students of one school stated that they do not like their teacher. Because there were only two respondents with this comment I did not create a separate column and counted the numbers under this coding.

5. *High fees:* A small number of students considered the amount of fees they pay high and they did not like it.

6. *Building:* A few students in one of the schools which owned its building said that they did not like the look of the building.

7.3.3.: The Ideal Greek School or how Students Want Their School to Be

The question was complementary to the previous one and was worded: 'How would you like your school to be'. I believed that this kind of data would be informative to the whole issue of the effectiveness of the G.S.S. It would definitely be very useful at the stage of pulling everything together, at the discussion of the results and the making of conclusions and recommendations. It could, for example throw light to the analysis of the results in the attitude scale (attitude towards the teacher and towards the school) and help to spot and explain any possible differences in the effectiveness of these schools.

The findings concerning this answer were not a surprise as they were related to the previous findings. They offered more information on the picture that the students have of their school and helped me in grouping the previous answers. I grouped the answers to this questions as follows:

TABLE 7.11.: How the Students Like their School to Be:

* As it is:	92 responses (46%)
* At a different time:	36 responses (18%)
* Some modifications:	40 responses (20%) (most of these modifications are part of the grouping in the previous question)
* No answer :	27 cases out of 202 gave no answer to this question

7.3.4.: Who the Students Consider an Effective Teacher

The usefulness of this type of data has already been discussed in the previous chapters and it relates to the fact that they may help to spot and explain any possible differences in the effectiveness of the different schools.

The responses to the third question which refers to whom the students consider an effective teacher were grouped as follows:

- 1. Personal qualities
- 2. Relations with the students
- 3. Method of teaching

-1. The Personal Qualities of the Effective Teacher

More than half the sample want the effective teacher to be strict. However, they usually put strictness aside with other qualities stating: 'strict and understanding', 'strict and nice', 'strict, fun, not rude, not violent, nice'. Additionally, almost all the participants want the teacher just to have a 'good personality' and to be 'understanding and

willing to help'. This quality relates to the second group of characteristics which refers to the relations with the students

-2. The Relations with the Students of an Effective Teacher

All the students want the effective teacher to be 'cooperative', to 'explain everything the students do not understand' and to 'care and discuss problems'. They also want him 'to be satisfied when students make progress' and, therefore, 'to care if students pass' .

-3. The Teaching Method of an Effective Teacher-students' views

About half of the students believe that an effective teacher should set high academic goals for all the students and be determined to help the students achieve them. As they said: ' a good teacher knows what he wants his students to achieve and he helps them achieve it', or 'an effective teacher knows the subject well, knows his students well and helps them accordingly'. Additionally 'he cares for all his or her students' and an effective teacher 'helps all the students'.

The finding which refers to the setting of high goals is quite interesting because this variable is considered a very important characteristic of effective schools in the effective school literature. One answer went further saying that such a teacher should be able 'to put across a higher message well'.

Some respondents see the effective teacher to be able to control the class, others want him or her to give a lot of information about the lesson. The quote below represents the general view of the population on the effective teacher. Such a teacher should 'have good notes, analyse literature in depth and care whether the students pass or not'.

A general comment I can make on the above findings is that all the qualities are 'established' as ones of an effective teacher in the relevant literature (Mortimore et al, 1995).

In 'School Improvement and Practice' (Myers, K., ed., 1995) 'purposeful teaching' is found to be related to quality teaching, and : 'The quality of teaching is at the heart of successful schooling' (Sammons et al, 1985, p. 15) .

'In successful schools, teachers are well organised and lessons are planned in advance, are well structured and have clear objectives which are communicated to the pupils. Successful teachers are sensitive to differences in the learning styles of the pupils and adapt their teaching style accordingly.'

(Myers, K, 1995, p. 10)

7.4.: Description of the Data from the Interview with the Teachers

In these interviews with a structured questionnaire, I inquired about the personal characteristics of the teachers, the methods of teaching he uses, their views on the goals and the running of the school with special reference to the role of the head and the management of the school in general. I shall use this information in the analysis of the effectiveness of the different schools and compare it to any similar data collected via other types of methods. The information I collected is presented below:

7.4.1.: Personal Characteristics of the Teachers

The first group of questions addressed to the teacher concerned their

age, experience, and qualifications. I shall use this information in the inferential statistics when I deal with the effectiveness of the groups of schools and the sector as a whole. Here, I shall summarise these findings and present them in the table below.

TABLE 7.12. : Teachers' personal characteristics

	AGE			EXPERIENCE			QUALIFICATIONS		
	A	B	C	A	B	C	BA *	MA *	PHD
Church	0	1	3	1	1	2	2	1	1
Independent	1	2	1	2	1	1	3	1	0
OESEKA	1	1	1	2	0	1	3	0	0

KEY: AGE: A=25-35, B=36-45, C=OVER 46

EXPERIENCE: A=0-5 YEARS OF TEACHING THIS A-LEVEL, B=6-10 YEARS, C=OVER 10

The applied Chi Square test for the differences in these characteristics amongst the three types of schools showed that those differences are significant as follows: For the teacher's age $p = .03$, for the teacher's experience $p = .7$ and for the teacher's qualifications $p = .0000$

7.4.2.: Teachers' Views on the Aims of the School

The findings from this type of analysis will be presented mainly in a descriptive form with some representative quotes. The most important issues will also be explored through the short questionnaire which was given to the teachers. In that case, quantitative measures will be given to the variables which represent those issues.

Having spoken about the teachers' personal characteristics, the

interview turned to the teacher's view on the appropriateness of having the provision of this A-level in the G.S.S. This piece of information is related to the goals of the school and the strength with which these goals are pursued.

All the interviewed teachers (11), generally, agree that this subject should be offered in the G.S.S. They make the point that through certain teaching techniques the G.S.S. can help their students with the maintenance of their Greek identity at the same time that they teach the A-level Modern Greek syllabus. At this point the teacher was asked, for similar reasons, to comment on the two goals that these schools pursue and how he or she ranks them. All of them agreed that these goals can not be separated and as a result they are pursued together. A point was made as to whether they should be pursued with the same strength all the time. Some teachers, more than 50%, believed that, especially in the last year of their course the students should not participate in any other activities of the school which are time-consuming and also keeping them from their work.

More specifically, one teacher said: 'In the first year of this course I allow the students some time to familiarise with the Greek literature and, in this way I help them to build a positive attitude towards this literature. This situation together with the fact that these youths remain close to the Greek Community for three more years, I believe, help them create a more positive attitude towards their Greek origin. We must never forget, however, that these students want to get good grades in their exams'.

Another useful COMMENT as far as the issue of the aims of these schools is concerned, is the following: 'Good A-level results should not be the first and only aim of the schools in this provision. We should

help these students become active members of the community and not be absorbed by the strong British environment... Live in this multicultural society with an identity and a awareness of their origin'.

7.4.2.: The Teachers' Teaching Methods as reported in their interviews

Teaching material

I, then, inquired about the teaching material they use in an effort to collect some information on their teaching methods and the degree of collaboration amongst the teachers. Most stressed the fact that there is not enough material to help them or the students. The needs of the students also vary between individuals and cohorts. As a result they all have to prepare most of the staff they uses and adjust it to the students' individual needs.

Homework

Within the same framework, the teachers were, then, asked about the amount and type of homework they give to their students. They all distinguished the type of homework by the year the students are in. They said that their aim in last year is to offer more practice to the students by giving them essays and translations similar to the ones they get in their exams. In the first year they stress practice on the language and work with the easiest pieces of literature. They eventually move to more difficult pieces of literature which require more abstract analysis and better mastery of the language.

They all said that they frequently mark and comment on the individual essays and other types of homework (the information on how frequently they mark will appear in the variables formed from the

teachers' questionnaires). Then they were all asked: 'What do you think the views of the students are on the homework you give them? Please comment on their reactions'. Some said that the students have no problem in getting their homework, but most commented that they usually get complaints followed by the remark the the students have got a lot to do. One teacher stated that he is sometimes asked, by individual students, to give them more homework.

The general attitude on this matter is expressed by the following quote: 'I do not expect a clear positive attitude or a warm welcome to homework I give them. You see, these students really give up their leisure time to attend and work on this A-level. Additionally, I have to give them a large amount of homework because the time that I teach this class, three hours per week, is not enough. The students, therefore, have to work harder at home. In the end, I have to work harder as well as I have to mark all this amount of homework and, at the same time, plan how to make the most of that little teaching time every week'. All the information obtained in the interviews informs the discussion of the results and mostly throws light on the differences amongst the students' performance.

7.4.3.: The Climate Amongst the Staff

Information was then sought on the relationships and the cooperation between the staff and the head teacher, as this is also considered a factor to school effectiveness. As far as the interference to the their work is concerned, all of them said that they feels quite 'free' to work as they like in their class.

Teachers' relations

The relationship with the other teachers was generally reported good with the comment that 'we only meet once or twice a week. We hardly have any time to talk, as the work is hard and demanding. No problems generally'. As far as the the relations to the other A-level teachers, the most common answer was 'I have no problem'. Some said ' We work together on the planning of the course'.

Facing a problem

I also inquired on the procedure they use when they have a problem in a class. Most teachers said that whenever they have a problem, they first try to solve it within their class, and if they fail, they discuss it with the head teacher who is usually understanding and cooperative. A number of teachers pointed out that sometimes they just have to 'compromise' if 'that is the policy of the school'.

Staff meetings

The next related issue was that of the staff meetings: their frequencies and their purpose. A third of the respondents stated that they have hardly any official staff meetings, but instead a few minutes talk during the breaks. Another third of the teachers mentioned that apart from some unofficial meetings they can voluntarily attend the meeting of the head with the parents' committee.

The rest of the teachers said that they attend, apart from the unofficial short meetings, at least three 'official' staff meetings per school year. These meetings last for more than two hours and include some organisational issues of the school and a presentation of one or more 'papers' by qualified teachers. These papers may include pedagogic, psychology or methodology and anything that might be related to the

aims and the work that is being done in these schools. Each presentation is followed by a discussion. The teachers of this last group find these staff meetings quite informative especially in educational aspects since 'sharing views, knowledge and opinions offers a lot to us as teachers and, through our performance, affects our pupils'.

7.4.4.: The Teachers Views on Student Quality

I, then, asked the teachers to comment on the students quality . Some pointed out that the policy of EFEPE, the coordinating body of this schools, is to attract as many students as possible in this provision, regardless their GCSE grades. The people of EFEPE believe that keeping the youths close to the community pursues their cultural aim. This policy, however, has lead to an increase in the numbers of students that enrol in the A-level course and a subsequent fall in their quality.

Some of them even predicted that in the near future the schools may have lower standards in the results of the A-level Modern Greek because 'not all students that enter this course are up to the required standards of ability'. A few of the interviewees stated that they do not entirely agree with the policy of convincing the students to enrol if they are not able enough and they do not really want to. One said: 'I believe that the community can find other ways to keep the youths close and offer them some 'Greek culture' which can be more pleasant and probably more effective in this respect'.

7.4.5.: The Teachers Views on their Salaries

The issue that the teachers' salaries may affect the efficiency of the teaching of the individual teachers and thus their effectiveness has

been of interest to educational researchers and policy makers for many years now. The variable which represents the teachers salaries will be included in the statistical model to be used. This information through the interviews will be used as supplementary to the statistical findings. A point to be made here is that there are big differences in the salaries that different schools offer (they range from seven to fifteen pounds per hour) and most of these differences are related to the type of school or the provider. They are also found to be significantly different in the statistical test of chi square.

Most of the teachers were rather straightforward in this issue. Some said 'I have no problem. The money is not great, but it is not bad either'. On the other hand, there were actually more than half of them that considered the money they get not even 'respectable'.

One said: 'This school pays the lowest wages, and still has some of the best teachers, God knows why. Of course, it is an organised school... But I think we should be paid more.' Another one commented: 'I feel embarrassed when I am paid. Why am I still here? I can't tell'

7.4.5.: The teachers' Recommendations on the Running of this Course

Finally, the teachers were asked to give any recommendations for the betterment of this provision. This information will inform the whole work and mostly the discussion and the recommendations sections.

More than half of the participant teachers considered the hours this course is taught per week to be inadequate. They repeated that three to four hours per week are not enough to cover the course content satisfactorily and up to the required standards. A few of them said that this situation worsens when we come to asking the students to participate in extra activities.

The point they made was that in the third year 'the exams should be a priority, not the only aim, but a priority'

A number of teachers pointed out that the use of visual aids, such as a video could be very helpful in widening the horizons and deepening the thought of the students at this level. The EFEPE could be of help in this respect as well on the issue of preparing some notes useful to the people involved in this type of education. Additional information on their view on the role that EFEPE can play in this matter was collected in the teachers' questionnaires.

7.5.: Description of the Data from the Interviews with the Head teachers

In these interviews of the nine head teachers in the schools of the sample, I firstly sought for some personal information, then some on the school's organisation and running and last I tried to collect information on the Head's leadership. In doing this, I kept in mind the the findings of the school effectiveness research which refer to the importance of the head's leadership role:

' Three characteristics are associated with successful leaders:

- * they are firm and purposeful
- * they adopt a participative approach
- * they are the leading professional.'

(Myers, K., 1995, p.8)

I grouped the information collected in the interview as follows:

7.5.1.: Personal Characteristics of the Head teacher

The characteristics in this coding refer to the head teachers age, experience as a head and qualifications. This information is presented in the table below which groups the data by provider.

TABLE 7.13. : The Head teachers' personal characteristics (n=9)

	AGE			EXPERIENCE			QUALIFICATIONS		
	A	B	C	A	B	C	BA *	MA *	PHD
Church	0	1	2	1	0	2	1	1	0
Independent	0	1	2	2	1	0	2	1	0
OESEKA	1	1	1	2	1	0	3	0	0

KEY: AGE: A=25-35, B=36-45, C=OVER 46

EXPERIENCE: A=0-5 YEARS OF TEACHING THIS A-LEVEL, B=6-10 YEARS, C=OVER 10

7.5.2.: The Head teachers Views on the Aims of the G.S.S.

The information I collected through the interviews with the head teachers will mainly be presented in a descriptive form with some representative quotes. At this stage I shall not attempt any comparison either amongst the schools or amongst the providers. I shall aim to present the picture in the whole sector giving any possible differences or similarities. This data will be used to inform the discussion on the findings of the other types of data from all analyses.

Some historical information

I, firstly, obtained some historical information regarding the introduction of the Modern Greek A-level in the G.S.S. This background information will be of interest and probably useful in explaining the attitude these people might have towards the aims that these schools pursue.

The 'story' I was told is quite similar to the historical background I gave in the introductory chapter. The main point was that the teaching of the Modern Greek A-level was introduced in some G.S.S. in 1967. As one interviewee said it was then that they 'realised that the children of these immigrants needed more and different incentives in order to attend the G.S.S.'. The same person added 'keeping young people close to the community, teaching them the Greek language and culture, offering them the opportunity to get an A-level certificate, will help our job and our major aim which is to help these young people maintain their Greek identity by offering the Greek culture to them'.

The rising numbers of students and the school goals

I, then, tried to obtain their views on the rising numbers of students, an issue which is greatly related to the aims of these schools. All Head teachers agreed that the numbers are rising but gave different explanations to that. Some thought that this rise is due to the change of the attitude of the students and the parents towards this A-level. They explained that this A-level is used as a 'university entrance qualification' nowadays, it is considered as an extra qualification in the local labour market, and it offers more prospects to the youths who want to work within the European Union. Most of the head teachers

interviewed believed that the above reasons were reinforced by the policy that is pursued by EFEPE to attract as many students to this course as possible.

Priorities amongst the aims

A more specific question was then addressed on the aims of their school: its priorities, whom they are set by, the agreement of the teachers and the students, ways they are pursued. The response on the priorities of these schools was quite similar to the responses of the teachers that 'these aims are pursued together' in general. Some Head teachers did not agree with the opinion of some teachers that the students in the last year of their course should not participate in other activities. One said 'Any cultural event which is carried out in or school should have all students participating. It offers to their culture, it improves their language and, above all, it reinforces the sense of community in the school'

Who sets the goals

As far as the question 'who sets the aims' is concerned, the answers were greatly related to the 'link to the school' that the Head teacher had and the years he or she was appointed there. The head teachers who belonged to the Greek or Cypriot delegation (teachers) said: 'It is the policy of the government, also expressed as one of the EFEPE'. The Head teachers who were appointed by committees mainly referred to the 'policy of the committee' and some 'of the EFEPE'

The teachers' role

All the Heads interviewed said that these aims are strongly pursued by

their schools as well. The teachers are aware, some said well aware of these aims and in the meetings or discussions they all refer to them. Some stated that the teachers hear about the aims of the school in the school assemblies when the aims are made clear to the students. One principal said: 'The teachers are also asked to repeat or hold similar discussions in their classes' . He added 'we know if our teachers promote these aims and that's what we want them to do if they wish to work with us'. This point, however was not made so strongly by all the interviewees.

7.5.3.: Some Organisational and Management issues the Heads Mentioned in their Interviews

Teaching time and cultural activities

The first issue in this group of questions relates to the previous one on the aims of the schools. It seeks information on the distribution of the teaching time amongst the different activities that the head teachers favour. The question refers to whether and to which extent A-level students should participate in the cultural activities that the school pursues.

All the head teachers that were interviewed believed that the A-level students should participate in the cultural events. Their participation, however should be different from the one of the younger students, both in terms of the amount of time and the type of effort. The head teachers think that teachers should act accordingly. One says 'I can understand the hesitations or even the objections of some teachers as they have quite a lot to cover in order to get the students ready for their exams.

But exams should never be their only aim. They can never forget that we want to help the students maintain their Greek identity. I believe they can manage, anyway. Our teachers are quite able’.

Another person sets the framework of this policy more clearly: ‘I believe that it is a good idea that these pupils participate in the different activities and celebrations of our school. They get more responsibilities, let’s say. This way they are more related to the Greek community and the Greek culture. We link theory and praxis in this way.... they should not spend too much time, of course,..., their participation should be at a different level and of different quality.... I usually refer to some kind of responsibility roles they should have.’

Their views on the teaching material

I, then, inquired on the material the teachers use in an effort to find out the awareness of the head teachers of the problems of this type of education and spot their views on these and especially on the cooperation amongst the teachers. The question was if what it exists is enough and whether the teachers cooperate in the area of producing material to share.

All of them commented that there is not enough teaching material available in this area and that they were aware of this problem. Some went on saying that the teachers in their schools, in cooperation, choose the set books and work together in producing accompanying material. Some went on commenting that this is not always successful as the teachers can not ‘compromise’. One commented: ‘We are happy to produce any photocopies of such group or, even, individual work no matter how expensive and time-consuming this might be’.

A point which is related to the above is whether the coordinating body for G.S.S., EFEPE, could help in this field. One Head teacher, having said that EFEPE might help with getting able people prepare some staff for all the students and teachers in the A-level provision, he stressed the fact that no one should 'sit and wait. Any work from any person or group wishing to do so will be welcome'.

The effectiveness of the A-level provision in their school

The head teachers were then asked to comment on the quality and the effectiveness of the A-level classes in their school. Some pointed out the use of unqualified teachers either because of the limited supply of qualified ones, or because the committee was not advised by them in their appointment. Two referred to teachers that do not even know the syllabus commenting that these persons are completely indifferent to any suggestion or recommendation they themselves may give them. One finished this comment saying: 'Fortunately, I tackled this person early enough... Then I had to speak to the committee.... Finally he was dismissed. This is not nice, of course... We are, however, very careful with the teachers of the last year.'

One Head teacher spoke very confidently of the teachers in his school. It might be worth mentioning that two more head teachers referred to the 'good' teachers that school has. He said: ' I am in the good position to say that the teachers in this school are qualified and do as much as they can to help their students. In other schools the teachers are not so qualified. I am always well aware of my teachers' work in the class and their effectiveness. I do not disturb them but I have my own ways to know what's going on in class'. It is interesting to note that in the schools where these problems were reported students performed worse.

As far as the teacher absenteeism is concerned, most of the Heads said that this is very rare. Teachers are generally on time and have a very low to medium absenteeism.

Their criteria for effectiveness

When asked on the criteria they set to judge the teachers' effectiveness, the head teachers said that definitely their first criterion is whether the teachers are qualified to teach Greek literature (they have a BA in Greek literature). Then, all of them stressed the fact that the teachers at this level should speak fluent English too. Then, they mentioned the personality and, of course, the results their students have in the exams.

A number of them pointed out that the view that the students have of their teacher must be considered as an important criterion of the teacher's effectiveness since the students 'are the best to judge'. One of them added that he can always find out the students' view of their teacher, without being a nuisance. Another spoke of the homework the teachers give saying that he is always informed on the amount and type of homework the students get and also on the feedback that the students get. Another head teacher said 'I rarely get complaints from pupils or parents when a teacher is good. You can see the relations to his or her students'

The head teachers' involvement in the appointment of teachers

In recent work on effective schools (Brewer, D., 1993, *Economics of Education Review*, Vol. 12, No 4, pp 281-292) the effects of principals were examined. It was found that wherever the Heads are involved in the teachers' selection procedure and in the setting of academically

oriented school goals , the principals do have a measurable impact on the student achievement .

I, therefore, asked the head teachers whether they were involved in the appointment of teachers in their school. I noticed that in the schools that the teachers were more actively involved in this procedure, there were not any serious problems regarding the relations of the staff reported. A head teacher in such a school said: 'Of course, I am the first to have a word on the matter of appointing teachers. When a new teacher is appointed, he/she has to be 'tested' first. New teachers are never given final year classes, they first work on a temporary basis'.

The management techniques they use

The head teachers were then asked to talk on the management techniques they use when running their school. Most of them mentioned the problem that the time they meet their staff is limited. They, therefore have to take advantage of the break time for any informal and even formal discussions. Some said that the teachers have to keep a register and a planner which they hand in to them at the end of each lesson. These comments were mostly made by the headteachers in the church and in the Independent schools.

Only one of them, however was very confident in his methods. He said: 'The main method I use is being aware of what is going on without interfering in my teachers' freedom. I listen to everybody. I observe everything which takes place at my school. I also know the abilities of my personnel and try to make the best use of them. I help the inexperienced and try to promote collaboration. Always being well informed, I try to organise the school in a better way. I put all main everyday events in my diary, the teachers keep a record which is

regularly informed and left in the school so that I can be informed as well. I have to make well informed decisions, you see.'

Their views on the optimal class-size

The next topic on the list was the specific issue of the most effective class size the stressed the fact that the A-level classes should not be large 'if we want good work to be done'. All of them believe that the number of ten students in the class could be considered an optimal one for this provision. As one puts it: 'A number of ten students is a best for this A-level. And I believe that they can pay their expenses'. This finding goes along with the findings of the inferential statistics which will be presented in the next section.

Some comments on the students' quality

As far as the ability of the students is concerned, here is a representative comment: 'As ability of the students is not always the same and, quite often, 'not good enough', I believe that we should all deal with this problem. Good examination results are not our only aim, anyway. We generally do not have discipline problems in this level and the drop-outs usually take place in the first month of the first year. Drop outs are usually pupils of low ability or ones with heavy load of other school related work'.

One suggested some kind of 'entrance exams' since the GCSE grade can not be considered sufficient- there is a large gap in the demands and the level of these two exams. However, he said that 'finally, the students that remain in the course are 'good in both behaviour and their academic results'.

Relations with the parents

Commenting on the relations with the parents, most agreed to the following comment: 'You see, the students that take the Modern Greek A-level usually come from families which have a good relation with the school, are interested in their children's education and generally do not create any significant problems'. One head teacher pointed out something spotted by the teachers as well: 'Parents, in general, cannot offer academic help to their children. They just check if they come to school regularly. If they create a problem, this is usually because of ignorance and is usually easily resolved through sensible talking.'

Some suggestions

The main suggestion for the betterment of the provision was towards more collaborative work in the field by the people involved. This work could be linked to any kind of aid that EFEPE would like to offer to the G.S.S. The collection or writing up of useful material for the teaching of A-level Modern Greek was but one of these suggestions which included:

- The appointment of qualified teachers
- The establishment of 'consortium of schools might save resources and make better use of qualified teachers
- A set up of introductory 'exams' for those who want to enter the course
- The organisation of seminars for the teachers
- Not very young students should enter the course
- Some kind of planning based on the analysis of information collected on a similar data base.
- Clear policy

Some comments on the financing of these schools

Then, the head teachers were asked to express their opinion on the way their school is funded and also comment on whether this funding mechanism influences the efficiency of their schools' provision. One of them set some kind of a framework by saying: 'These institutions have been established on a private basis. The governments of Cyprus and Greece have always been on our side offering different type of help. The council has helped us in different ways as well (mostly under the section 11). Our main income, however, is the fees that the students pay and some donations from individuals or trustees. There is a 'committee of finance' which deals with these matters. I am a member of this committee but I can not always deal with money matters the way I want. You see, there is a serious constraint over these funds and choices have to be made all the way. You know that this is a community with many and different problems'.

A head teacher of one school was informed that the teachers in his school complained of their low wages and added that in almost all other schools teachers have a higher pay. The Head said that this is probably true adding: 'I cannot deny that better wages will make teachers feel more comfortable and probably work harder, but I must admit that there is nothing more I can do. I have always supported my teachers and I always will. They are good teachers, however.'.

7.6.: Description of the Findings in the Teacher's Questionnaire

The short questionnaires (see Appendix) given to the teachers sought more specific and 'measurable' information on some of the issues that

were discussed with them. I have already commented on the usefulness of this information. Generally this data will be used to to give a clearer picture and supplement the findings of the other relevant pieces of research I undertook.

The first group of questions which had a five point rating scale from never to always and had thirteen questions. A group of four questions was designed to tackle the teachers' views on the support and stimulation they offer to their students (teaching attitude). Another group of four questions aimed to spot the teachers' attitude towards the management of the school.

One question of this group was on how often the students are given homework and another one, related to it, on whether the students get marks and/or comments on their homework. The last three questions were on the type of teaching material the teachers use- their own, designed with other members of the staff or from the market.

The second group of questions had a five point rating scale from strongly agree to strongly disagree and had eight questions. The first two questions asked them to 'rank' the two aims of the school. Three questions aimed to find out the teachers' opinion on the students behaviour, attendance and work in class. One wanted them to rank their view on whether 'a teacher is the most important factor to having good results'.

Another question tried to 'measure' the strength with which the teachers believe that students should be involved in the culturally related activities of the school. This was found to be an issue of debate amongst the interested in the provision agents and it is obvious that it is related to the cultural aim that the G.S.S. pursue. That is the reason

that I tried to collect as much a variety of information on this issue as possible. The last question aimed to rank the teachers belief that they need some extra teaching material as an extra help to their teaching efforts.

The findings in the teachers questionnaires are presented in the table below:

TABLE 7.14. : The findings in the Teachers Questionnaires

Question	Provider 1		Provider 2		Provider 3	
	Gl	P	Gl	P	Gl	P
Aims	14	13	12	13	13	13
Homework (given)	14		15		15	
Homework (marks)	12		12		13	
Teaching Attitude	17		18		18	
School Management	17.6		17		17	
Students': Attitude	5		4.1		4	
Behaviour	4		4.3		3.3	
work	4.3		3.6		3.6	
Teaching Material: Own	4.1		4		4	
With others	3.6		3.3		3.3	
From market	2.6		2.6		2.6	
Must prepare	5		4.3		4	
Teacher as a factor to effectiveness	4.3		4.6		4.6	

Note: The score indicated here is the mean score of the teachers in each provider.

KEY: GI: Greek identity, P: Performance

The averages of the quantitative data obtained here agree to the information that the qualitative data which was collected through the interviews offered. In summary:

- A general observation is that the differences in the average scores are not great. Since the number of the teachers is only 11, I did not test for the statistical significance of the differences. I comment on them and relate them to the other findings, especially the one of the inferential statistics that the church schools are the most cost-effective with the Independent schools coming second and the OESEKA schools coming third.
- The mean score of the ranking of the aims of the schools was quite high and not very different between the two goals or amongst the three providers. The church school teachers ranked the aim which is related to the students' Greek identity higher. The teachers in the Independent schools ranked the aim which is related to the students' performance higher, while the OESEKA teachers gave the same score to both aims.
- Most teachers believe ¹ in giving homework to their students, but they do not believe as highly in the marking of the students' homework.
- The attitude of the teachers towards their teaching in the particular class had a high positive score, slightly higher in the second and third provider. It could be that the one church school which appears less effective is the one which lowers the score in this and other measures as well.

1

- The teachers' views on the schools' management are ranked similarly to the previous set of questions.
- The teachers in the church schools give higher scores to the students attitude towards the subject, the students' behaviour and their work. The church schools were found to be the most cost-effective in the statistical analysis.
- The teachers in the church schools are probably more likely to prepare their own teaching material and also work with other to do that. Most teachers believe that there is a need for the preparation of such material (probably by EFEPE)
- It is notable that the teachers in the second and the third provider have got stronger views on the teacher being the major factor to effectiveness.

CHAPTER EIGHT: Inferential Statistics

8.1.: Introduction

The main aim of this study is to find out the cost-effectiveness of the A-level Modern Greek provision in the Greek Supplementary Schools of London. In doing so, it will first identify differences of the cost-effectiveness in this provision amongst the nine schools of the sample which represent the three types of providers of A-level Modern Greek. Having spotted any possible differences in the effectiveness which concerns the A-level scores, the study will then try to find out which of the variables, that have been included in the design, might explain those differences in the A-level performance and to which extent. These findings may inform the discussion which concerns general educational issues and any possible recommendations to the policy makers.

In this chapter I present the procedure and the results of the statistical analysis I undertook to check for the cost-effectiveness of A-level Modern Greek provision in the G.S.S of London. I have referred to H. Thomas's (1990) similar type of work in the previous chapters. I also commented on the type of statistical analysis he used which was the ANOVA of the SPSS package (analysis of variance). Analysis of Variance and Regression Analysis (OLS) were the two types of analysis procedures that, according to the needs of the present study, could be employed. Although in some aspects of data analysis the two techniques bare similarities, or show equivalence, certain of the differences between them, which were discussed in the chapter of methodology, counted in favour of OLS analysis. In doing this the study proceeds gradually by examining the effects of the different variables in a single

and in a value added model.

The advantages of multi-level analysis which focuses on individual students in a hierarchical framework have already been presented in the review of the work by Fielding (1995). As the data I had on students' performance was at an individual level, some input variables were at an individual, others at a group and others at an institutional level, it might have been more appropriate if the analysis used could examine the data at these different levels in a hierarchical framework. A three-level model should be build, with intercept random at all levels.

Initial three-level variance component analyses were performed on the data in a preliminary attempt to understand the data. The sources of variations at the different levels were checked and the relative variables were checked for influence.

Having taken into account the hierarchies, a model had to be built which to some extent might predict the A-level score (called the response or dependent variable) from the other variables (called predictor, independent or explanatory variables). Then, it had to be judged which variables appear to be the most powerful predictors. The question to follow was 'does the school contribute significantly to the predicted score, once other variables are taken into account?'

In designing the model the literature on effective schools was taken into consideration and, in addition, the literature on model designing. As Aitgen and Longford (reproduced in Fielding, 1995, p 166) say, the minimum requirements seen to us to be as follows:

- ' (i) Pupil-level data and outcome, intake, and relevant background variables,

together with relevant school and LEA variables.

(ii) Explicit modelling of the multi-level structure through variance components at each sampling level....'

Such a model would mainly include some measures of the following:

1. Students' prior attainment (GCSE grade)
2. The gender and age variable or any other personal characteristics
3. The most significant of the SES measures
4. Some measure of the cost
5. A variable concerning the school or the school type.

An effort should also be made to find out if the characteristics other variables, entered as dummies, make any difference to the performance of these students. Such variables refer to characteristics of the teachers, the head teachers, the school organisation, ethos and climate. In this way we might be able to tell where the real difference in the variation of the A-level grades is.

In the process of analysis, each of the parameters of interest will be examined for its effects on the A-level score. Additionally, when we begin to deal with school level data, two levels of variance will be defined, i.e. student level as level one and school level as level two respectively.

A brief reference to the regression equation will make things clearer. Multiple regression equations are of a general form:

$$y = a + b_1x_1 + b_2x_2 + b_3x_3 + \dots + b_px_p + e \quad (8.1)$$

where y is the observed value of a dependent variable, $x_1 - x_p$ are independent variables, $b_1 - b_p$ are coefficients associated with each variable and a is the intercept. Finally, e is the random error or the departure of a subjects observed score from the score predicted by the rest of the equation's right-hand side. This is also known as level-one residual.

In a two-level variance components analysis, the equation (8.1) becomes:

$$y = a + b_1x_1 + b_2x_2 + \dots + b_px_p + e + u \quad (8.2)$$

where u is the level two residual and, in this case, it the departure of a school's actual intercept from the value a predicted for all schools.

8.2.: The Procedure of the Analysis

In doing this analysis I followed the steps below:

8.2.1.: Step one:

The first step was to test each of the above described variables individually, and find out if they have any significant effect on the A-level score and thus might be able to explain part of the variation that appears in the A-level scores. During this procedure I also identified the variables with the stronger explanatory power. In this way I could test for any significant correlation between the A-level score and the other variables. Significance of regression coefficients was tested by the use of t ratio. When necessary, confidence intervals were calculated.

Significance in all tests has been set at the 0.05 level which gives 95% confidence on the significance of the findings. When the level of significance proved to be below 0.01 the results were reported as highly significant.

8.2.2.: Step two :

Thomas (1990) considers the variable which measures the students' prior attainment the best control for students' intake. This means that, if we keep the GCSE score in the regression model, and gradually enter the other variables, we can assume that we are looking at the progress of the students in each specific school. In other words, we are testing for the value added for the students of each individual school.

Actually, the analysis in the first step showed that the GCSE score of the students in the sample was the best predictor of their A-level score as we might expect. Thinking, however that this relationship might be quadratic and not linear, I explored non-linearity.

Then, following the procedure described in the previous paragraph, I tested for the explanatory power of the individual and the SES measures. At this stage I picked the most significant predictor of the two groups of variables and kept them in the model.

8.2.3.: Step three:

Having formed the model described above, I, then, proceeded to explore the effect of the schools to the students' performance. The analysis here was carried out with both packages: the SPSS for regression, and

the ML3 for multi-level modelling. I shall report the results given by ML3 as they are generally considered more detailed and reliable when levels of variance exist. In the Appendix the results that the SPSS package gave are presented and compared to those of the ML3 package.

To carry out this type of analysis, I entered the school dummies in the model and tested which had the most significant effect on the A-level score. In this way I spotted the amount of variation in the A-level score which was due to the school level variables.

8.2.4.: Step four:

In this stage I had to test for the cost effectiveness of the schools and, thus, I entered the cost variables in the model. The cost variables included two expressions: the cost per pupil which counted for the institutional cost for the three years of this course and the teachers salary variable which expressed the teachers weekly salary for each class. The variables were entered in the model separately. The salary variable contributed to most of the differences in cost amongst the schools.

8.2.5.: Step five:

All the previous analysis indicated that the differences amongst the groups could be due to their provider, that is their type. Now, I had to enter the provider dummies in the model, see how this appears and make sense of what comes out. I also had to put the school level variables in the model. Those of the school level variables which, by now, proved to explain a significant amount of the variation in the A-level scores, and see how they behave with the cost parameter in the model. Then, I gradually tested the organisational variables and the

school ethos variables which I had included in my design for any significant effect on the A-level score. Finally, I kept the most significant of these variables in the regression model and tried to test for any interesting results.

8.3.: Description of the Findings

8.3.1. Step one:

The variables which were found to have significant effect on the A-level grades when entered alone in the regression model are listed below. This can be considered a list of the variables that may, potential, have an effect on the dependent variable. The order used in the list is descending according to their explanatory power:

TABLE 8.1.: List of the Variables with a Significant Effect on the A-level Score when tested alone in a Regression model.

Strong Explanatory Power (Multiple R > 0.25):

- * The expected grade as given by the students
- * GCSE grade
 - Mother's occupation (excluding the cases which are housewives)
 - Head teachers' experience
 - Mother's education
- School identification
- Group size

Medium Explanatory power (Multiple R > .15)

- Whether there is Greek climate in the school (students' view)
- Number of teachers that teach in the last year of the course
- Father's education
- The type of the school (provider)
- Teacher's qualifications
- Frequency the students reported that they do their homework
- Whether there is academic climate in the school (students' view)
- Teacher's experience in teaching A-level Modern Greek
- Institutional cost per student for the three years of the course
- Headteachers age
- School satisfaction
- Relevance of the teacher's qualification to the teaching of this specific subject
- The students' satisfaction from this subject
- The school identification
- The hours they are taught every week
- The gender

Weak explanatory power (Multiple R < .15)

- Greek culture in this course (students' view)

- The students' satisfaction from doing their work
 - What the students want to do with this A-level certificate
 - Teacher's age
-

Some Comments Concerning the Above Findings

As stated before, the above 'pool of variables' can be considered as the source of the possible predictors of the A-level score. It is not surprising that the expected grade might have a significant effect on the A-level score. It is believed that the students are usually well aware of their knowledge and ability (see the chapter of the review of the literature and Delap, 1994)). The expected grade, however, cannot be considered either a clear input in the educational process, or a definite output of it. It represents the expectations of the students which might have been influenced by different factors which may or may not be in the school environment. The grade the students report that they expect to get in the exams certainly is connected to their results and, at the same time, it has been affected by some school factors as well as by their previous attainment. It could be the case that some of the other variables may pick up its effect, or that it may pick up the effect of other variables. I shall, therefore, not keep this variable in the model in the next step as it may distort the results.

Furthermore, the variable which is of major interest in this study, which is looking at the 'value added component' of this specific educational process, is the GCSE grade. Its effect is highly significant with a coefficient of 2.19. It explains 27% of the variation in the A-level scores of this sample of students. When the model was tested for non-linearity, the quadratic factor of the GCSE score was found

statistically insignificant. The results are shown in Appendix 6.6..

Of the students' personal characteristics, only gender was significant with a negative coefficient for the boy. This means that boys are expected to perform worse in the exams.

The SES variables which measure the characteristics of the father and the mother appear all significant at this stage.

The school identification, that is the specific school each student attends, has an effect on the A-level results when entered alone in the regression. This means that there are differences in the performance of these schools, which might explain some of the variation in the A-level scores. Schools alone, however do not explain a significant part of the variation. Here I should mention that the variable on the identification of the students' mainstream schooling did not have a significant effect on the A-level performance.

It appears the head teachers positively influence the students' A-level score. The main factors that are significant is their experience as headteachers' in the G.S.S and their age. It also seems that male head teachers are more effective in the G.S.S. as far as the A-level provision is concerned (see Brewer, 1993).

All the teachers' variables (experience, age, salary, qualifications and relevance of their qualifications) seem to have a significant effect on the A-level score (see Mortimore et al 1992). There is an interesting finding which concerns the gender of the teachers. It seems that female teachers perform better in the teaching of Modern Greek A-level, as their students generally perform better in the exams. I shall comment on this finding in the final chapter of the thesis.

Of the organisational variables the group size seems to have a significant effect on the dependent variable and the number of teachers that teach in the third year (see Chapman, 1993 and TES, Sep. 7, 1995, p.3). It seems that a group size between 5-10 students is the most effective in terms of their students' performance. It is also true that the students in a school where the number of classes is more than one and thus the number of teachers is more than one, are more likely to perform better in their A-level exams.

The type of the school also appears to be a significant explanatory variable in the model. Type 2 and 3 schools appear to perform worse than type 1 schools, as they have a negative significant coefficient.

From the variables designed to measure the students' 'dedication' to this course, the one which appeared to have a significant effect on the A-level score was the frequency that the students reported that they do their homework. It seems that the more work students do for this A-level course the better results they get in their exams (Mortimore, 1995).

The next group of variables reflected the school climate and ethos variables. The students' view on the existence of Greek climate and academic climate in their schools seemed to have a significant effect. Also, the measure of their satisfaction from their work, the subject and the school were significant when entered alone in the regression (see Hazelwood, 1990).

The cost variable, as well as the salary one, seemed to have a small but significant effect on the A-level scores. This effect, however appears to be negative, this meaning that higher spending is related to lower

performance or, in other words, schools with lower levels of spending perform better, even when their teachers have got lower salary. The cost per student in type 1 schools is lower, but still their students perform better in the exams.

This might seem peculiar but it has been found in other studies in the past as well. Hanushek (in Hoffman, ed.,1995, p.) lists the findings of the studies that tested the influence of levels of school spending on the performance of their students. He writes that of the 16 studies that found cost to have a significant effect on the student performance, 3 found this effect to be negative. Hanushek makes the point that it is not the level of spending alone that matters for good performance, but the best and efficient use of resources.

In the case of the schools in this study that seem to perform better at a lower cost, it could be that the explanation lies in some qualities of the teachers or of the school organisation. Such might be the teachers qualifications and their dedication or the headteachers' experience. These variables were found to have significant differences amongst the schools and the providers. The other types of analysis revealed similar findings too. Type 1 schools (except from one) had more experienced headteachers, their teachers expressed dedication to their school even if they had complaints on their salaries and, also, their teachers gave a higher score to the management and the organisation of their school. I shall elaborate more on this matter when I bring all the results together.

8.3.2.: Step two:

When I hold the GCSE grade constant in the model and, thus, control for

the students intake, the picture of the results changes. The effect of some variables becomes insignificant, this probably meaning that it is picked up by the control variable (GCSEG). Such variables are the father's education and the father's occupation and the headteachers' age. Also, the gender effect became insignificant, again showing that this effect was incorporated in the GCSE grade which is being used as a control variable.

At this stage I had to dismiss the mother's occupation measure as the results of regression were based on a limited the number of observations- it excluded the cases where the mother was a housewife and calculated the results on 124 cases. I tried to give a value to the ranking of the housewives and got insignificant results of that variable in the regression model. Any results of this kind, anyway can be considered spurious.

When I entered the mother's education dummies, it appeared that only Tertiary education had a significant positive effect on the dependent variable. This probably means that only mothers that graduated from higher education institutions had a significant effect on their children's performance. The results I got when I entered the MED (mother's education) variable in the model appear in Appendix I shall discuss on this result later.

8.3.3.: Step three:

At this stage I shall present the results I got when I used the ML3 package (as discussed earlier). In Appendix 8.1. I also present the findings from the multiple regression of the SPSS package for comparison.

To test for the school effect the school dummies were produced having school 1, which belongs to provider 1, as the base. The results showed that all schools performed worse than school 1 as they all had negative coefficients. All the significant results come from schools that belong to the other two providers, apart from that of school 9:

TABLE 8.2.: The Results of Multi variate Analysis using ML3

PARAMETER	ESTIMATE	STANDARD ERROR
CONS	-6.617	1.642
GCSEG	2.072	0.2423
SCH2	-1.567	0.7007
SCH3	-1.234	0.7475
SCH4	-2.191	0.745
SCH5	-0.3897	0.5736
SCH6	-2.206	0.8588
SCH7	-2.288	0.6688
SCH8	-1.976	0.8136
SCH9	-1.62	0.7136

* The t ratios are the numbers in parentheses. They are calculated by dividing the estimate of the parameter and the SE. A number over 2 (1.96.) at 95% level of confidence.

If we rank the schools according to the value of their coefficient and, thus, their effectiveness we get the results in ranking 1. If we rank the results according to the results of the regression in the SPSS package (OLS-ordinary least squares) the Ranking will be as it appears in Ranking 2:

TABLE 8.3.: Ranking of the Schools According to their Effect on the A-level Grades

Ranking 1 (ML3)	Ranking 2 (SPSS)
School 1	School 5
School 5	School 3
School 3	School 1
School 2	School 9
School 9	School 8
School 8	School 2
School 4	School 7
School 6	School 4
School 7	School 6

There are some differences in the ranking mostly in the top and low schools. It should, however be pointed out that the two packages did not give significant values to the same coefficients were . When I entered the provider dummies in the model, however, the picture in both packages becomes more or less the same: the effect of the schools is picked by the providers (except in school 9) with the provider 1 schools performing better and the provider 2 and provider 3 schools to follow in turn.

Some light was thrown on to why these differences might be there, from the other types of analyses. These were the organisational issues or issues related to the staff morale. The model in this case becomes as it appears below. The coefficients of all the variables but the Med (mothers education) are significant:

TABLE 8.4.: The Effect of the School Type on the Performance of the Students

PARAMETER	ESTIMATE	STANDARD.ERROR
CONS	-6.58	1.603
GCSEG	2.019	0.2533
PROV2	-1.423	0.4698
PROV3	-1.472	0.4037
SCH9	-1.382	0.6078
BOY	0.06026	0.02385
MSEC	-0.2166	0.5202
MTER	0.6267	0.5867

8.3.4.: Step four.

Institutional cost-effectiveness

It is interesting that when the school and provider dummies are in the model, the cost variables became insignificant too. So, the main differences due to cost are related to differences between the providers (apart from the differences in school 9). However, if we are to answer the question 'Which of these schools are the most cost effective', the answer might be: Schools 1 and 5 which belong to provider 1- which are church schools- are the most cost-effective. School 9 which is a church school is not as cost effective. The provider 2 schools appear to be the next in cost effectiveness and the provider 3 schools last.

I have to mention that the results I obtained from the multiple

regression when I entered all the explanatory variables in (plus the cost), appeared to be slightly different from those I obtained from the ML3. The estimates of all variables but the GCSE grade were insignificant in the SPSS results. This might be due to the inability of Multiple Regression in SPSS to take account of the variation in the different levels and thus offer more reliable estimates. Below, I present the results on ML3 when I included in all the variables I described above. The provider and the school 9 dummies are significant:

TABLE 8.5..: The Effect of the Cost and the School Type (provider) on the Performance of the Students

PARAMETER	ESTIMATE	STANDARD ERROR
CONS	-6.949 (4.2)	1.652
GCSEG	2.108 (8.8)	0.2437
SCH9	-1.425(2.3)	0.6004
BOY	-0.3009 (0.86)	0.352
PROV2	-1.428 (2.04)	0.7035
PROV3	-1.5 (2.3)	0.6508
COST	-0.001964(0.025)	0.08263

Individual cost-effectiveness:

To find out the individual cost-effectiveness of doing an A-level Modern Greek course in the G.S.S. of London, I had to form a model which included all the variables at the level of the individual students. That is, their characteristics, their personal characteristics and their SES.

Then, I entered the individual cost in this regression model, in an effort to test whether this variable explains any of the variation in the A-level scores amongst the individual students. The individual cost variable was found to be significant, but with a very low, negative coefficient (-.004442). So, the fact that doing this A-level may have higher individual cost to some students, does not mean that these individuals will perform better in the exams. The truth is that individual cost was found to covary with the school identification and the provider variables. Consequently, it could be that other reasons influence the students choice of doing the course in a type of school which contributes to a higher individual cost. We shall discuss this in the next chapter.

Consequently, when the provider dummy variables enter the equation, the individual cost parameter becomes insignificant, but still remains negative with an even lower coefficient. This could mean that the types of schools where the individual cost is higher do not necessarily have higher A-level scores and thus, they are less cost-effective. These are the same schools that were found to be cost-effective for institutional cost.

8.3.5.: Step five

This stage was actually related to the previous steps. I tested all the other variables for significance holding the school variables in the model. I tried, thus, to find out how much of the variation in the A-level score could be explained by differences at the school level, either between the schools or between the types of schools. When I found that certain variables became insignificant I tested them for covariance with the school and the provider dummies. In all the cases, those

variables were found to covary significantly with the school variables. It seems, therefore, that their effect was due to school or type of school differences and as a result it was picked up by the school variables. I report the findings of this procedure below.

8.6.: Summary of the Results

An important finding of the procedure in step five is that the mother's education variable becomes insignificant when the provider and the School 9 dummies are in the equation. This may mean that the mother's influence is picked up by the provider variable - in other words, mother affects the A-level score through influencing the choice of a type of school.

Of the school organisation, teacher and head variables some became insignificant when the school variables entered the regression model. The effect of the teachers was picked up by the type of school variable and thus all its measures became insignificant. Of the head teachers' effect most was also picked by type of school differences. Only the head teachers' experience effect remained significant. The number of teachers was still significant.

Of the variables that referred to the climate and the ethos of the school, only the one which is related to the Greek cultural climate or ethos in the school was due to differences amongst the types of schools (significant test for covariance was performed). Its effect was, therefore, picked by the provider variable. This finding might be of interest in the analysis which refers to the cultural aim of these schools. It means that the students' ranking of the existence of Greek climate in their school is related to the type of school the students

attend.

All the other measures of satisfaction, and of the school's academic climate or ethos also had a significant effect on the A-level score. At this stage I thought that the expected grade (EXPMARK) could be a variable that picks some of the effects that the process variables have on the A-level grade. So, I tested all the significant process variables for covariation with the expected grade. I found that most of them covaried with the expected grade (the subject satisfaction, the students view on the effectiveness of their teachers, the students view on the existence of Greek climate in the school, the students' participation in other cultural activities, and the satisfaction the students get from their work). I, therefore decided to enter the expected grade (EXPMARK) as an explanatory variable in the regression model which will count for some process variables. The model, therefore, becomes as it appears in Appendix . I have already commented on the fact that the effect of the cost is picked by the school variables. Such a model needs to be tested and elaborated upon on both the theoretical and empirical grounds.

The variables with a significant coefficient explain a considerable amount of the variation in the A-level Modern Greek results, around 72%. This is a rather strong explanatory power of the model. The predicted A-level grades are affected by the students prior attainment first, which controls for students intake ability, their prior knowledge, their personal characteristics and their SES characteristics. So the effect of these characteristics is picked by the GCSE grade variable. This finding goes along with what most 'value added' analyses do (Thomas, 1990) : they control for those variables using the prior attainment score. Also, the A-level score depends on some process variables which mostly represent the students satisfaction from the

work, from the subject, from their teacher and from other characteristics of the school ethos and climate.

Then, the differences might be explained by the type, or provider of the school the students attend. Students who go to type 2 and 3 schools are likely to perform worse in the A-level exams than the students in type 1 schools. However, students in school 9 perform worse than the other students of the type 1 schools. The effect of cost is picked up by the effect of the providers.

8.7. General Conclusions

It seems that the church schools are the most cost-effective as they perform better at the lowest cost. The differences in their cost-effectiveness could be related to the utilisation of the resources on one hand and to some organisational factors on the other. Factors related to the teachers dedication which was actually revealed in the interviews, might also contribute to the better A-level results. More detailed account and discussion on the significance of the findings will be given in the next chapter. In that chapter, the results of the other piece of work which concerns the cultural aim of this schools will be brought together. Then an effort will be made to evaluate the effectiveness of the schools as far as both aims are concerned.

CHAPTER NINE : Analysis of the cultural data

9.1. Some Introductory comments

At this stage I shall describe the procedure which was established for the Discourse Analysis of the Conversation of the three groups which represent the three types of providers of the A-level Modern Greek. I have already explained that this piece of work on the cultural aim of the G.S.S. was undertaken to complement the study on the effectiveness of the educational provision in this field. I always had to keep in mind that the question which this analysis needs to address is the following: if these students have reasonable knowledge and or awareness of 'Greek identity' and their relation to this and to the Greek culture, what are their attitudes towards this? The analysis also wants to find out what or how the Modern Greek A level contributed to the formation of these attitudes as this is supposed to be one of the objectives of the G.S.S. which run this course.

The answer to this question will be sought by examining the degree of cultural difference that these people share, as well as by identifying the discourses which appear in the conversations. In analysing the conversations, the discourses of 'Greek culture and identity', which will be the topic of the conversation, will be identified. The physical context of the conversation and the type of discourses will then be analysed. An effort will be made to identify the effect the school has in the formation of the Greek culture and identity discourse. Then, this will be compared to the effect that the other groups or institutions, which create and influence discourses, might have to the discourse of Greek culture and identity.

In this section I shall firstly describe the sampling procedure, then refer to the procedure within the group, go on with the description of the phase of transcription and then present the discourse identification and the conversational style exploration which taken place. I shall first set the specific framework before presenting the two stages of analysis. Within these analyses I shall refer to the features of each specific group, analyse the group process, the role of the researcher/facilitator and the features of conversation and analysis. Finally, I shall proceed to the analysis of the main discourses which were identified in the conversation within each group aiming to find out the answer to the research question set.

9.2. The Sampling Procedure

During my visits to these schools I met both the head teachers and the teachers and explained to them that I would like to have a structured conversation with a group of students from their schools. Most of them were helpful and gave me the opportunity to speak to the students about this 'group setting'. I explained to the students that this group meeting, was to discuss issues 'relevant to their Greek school and their Greek origin'. We invited all the students of each group of schools to the 'meeting' on a day that could be convenient for most of them. In this sense, the participants were not chosen in any specific way. Any student of the last year A-level in this group of schools wishing to participate was welcome.

As those students were quite busy getting ready for their exams, it was not easy to have many participants in the group. The first group of provider 1 consisted of fourteen students, seven girls and seven boys. The second group of provider 2 had nine students, six boys and three

girls. The last group of provider 3 had eleven students, seven boys and four girls. Most of the participants in all groups were known/familiar to another.

9.2.1. The procedure in the group

The group conversation took place at one of the school buildings accordingly. The choice of the language in the conversation was negotiated with the participants. Most of them stated that they would not mind if conversation took place in either English or in Greek. They, generally, preferred to speak in English and, in all three conversation cases, were able to change to either of the two languages when it seemed to be more convenient for them to do so.

The issue of the language used by the students could be central in research like this. It will be discussed in detail later. However, at this stage a few comments can be made regarding the implementation of the procedure. The language of speech was spontaneously chosen by the members of the groups. I usually spoke in both languages. All members of the groups, but two in the first one, spoke in English. One of the two people speaking in Greek had recently arrived from the Greek mainland and the other one from Cyprus. They were both quite fluent in Greek. It will appear in the analysis that most students used some Greek expressions or words in their conversations which are 'culturally related'.

At the beginning of the meetings the members were welcomed and thanked for their willingness to participate. They had all met me in their schools when I distributed the questionnaires for my research. I explained to them that they would help me with my research if they

truly and freely expressed their views on the topic of conversation. A set of enabling questions was prepared beforehand (seen in the chapter of methodology) and could be used whenever and wherever necessary. These enabling questions were written down, after having taken into consideration the theoretical framework discussed before.

The opening question for each group was set accordingly. The first group which was facing the exams in a week's time, was asked about their feelings as the exams were drawing near and what their present expectations were. The second group had recently participated in a petition against the exclusion of the A-level Modern Greek from the University of London syllabus. The opening question referred to that. The third group, again, had their exams in a few weeks time and the conversation opened through that issue.

The discussion then turned to this A-level and how it is related to their 'Greek identity and culture'. 'Greek culture' was defined and used in its 'transformed' meaning which is located in the very doings of the members (who in this case are of the same ethnic group) in their talk, their descriptions, their formulations, their disputes, their searches for help and more as *a deus et societate* (Benson, D., 1983): 'The use of categories and the display of culture' in the 'Perspectives of Ethnomethodology by Benson, D. and Hughs, J.

More specifically, I tried to identify the observable and non observable phenomena of Greek culture which the students had in mind. Then, I listened to their views on these phenomena. The discussion was focused mostly on the traditions, habits or customs. It was also concerned with what underlies them: *how they are created, their interrelationships and the attitudes of the students towards them* (Robinson, 1985, p. 12).

The students of the G.S.S. are exposed to the observable phenomena of the 'Greek culture' every school day (and obviously during the hours they are with their family). Although we can assume 'no simple one-to-one relationship between ethnic units and cultural similarities and differences' (Barth, 1969 as reviewed in Murata, 1994), it will be part of this research to see how some cultural features are used by the actors. We might then be able to draw some conclusions relevant to the research question set.

I did not insist on definitions of the different expressions of 'Greek culture'. Neither did I check the understanding of the term 'Greek Identity'. It is true that no term is ever used in an identical way by two people. At the same time, I had to be cautious as a formulation of an ideal type definition could prevent me 'from understanding the phenomenon of ethnic groups and their place in human society and culture' (Barth, 1969, p.11, *ibid*).

The members of the groups had no problem in expressing their views on the topic and there were hardly any hesitations in the conversations. Sometimes, I had to interfere as a facilitator, but this is quite common in focus groups discussions. I shall explain my role as a facilitator in the relevant section of this chapter. One could comment that these young people today, do not 'have' to keep silent about their origin. In studies which were related to the Greek community in London (Papafoti, 1984), we find comments on the fact that the previous generation felt that they must 'hide' their origin and, thus, 'adjust' to the British environment more easily. (I elaborate on this in the introductory chapter). The families of the A-level Modern Greek students today, openly keep most 'Greek' traditions. At the same time, they are active members of the British society.

9.3. Analysis

9.3.1. Transcription

During the meetings I used at least two tape recorders which I positioned at different places in a way that could record most speakers in the best possible way. However, despite the good quality of the apparatus used, it was sometimes difficult to pick up what had been said, especially when there was much talking at once. Having been in the group, made it easier for me to recognise what was being said at times. However, this also raised the likelihood of projecting my own understanding of what was being communicated.

The process of transcription always involves some degree of transformation of data and requires multiple reworkings for maximum accuracy . The fact that I transcribed two tapes for the same group helped this reworking. Additionally, I was aware of the fact that transcription of talk does not capture the many non-verbal communications of such a process.

The existence of two languages in the text raised some tricky questions for a methodology which lies within discourse analysis. When the student spoke in Greek there was the issue of whether to aim for translation of meaning or content. Sometimes, the process of translation inevitably involved interpretations on the part of me as a translator. This could produce something which would likely be somewhat different from the original.

Overall, it needs to be recognised that transcription and translation are

not simply mechanical acts resulting in replicas of 'live talk'. The process of carrying out these activities necessarily creates new versions of the discourse which reflect the positioning of these involved. The intention, however, was not to carry out a detailed language analysis, but rather to look at broad discourses, sketch the range of talk and explore the conversational style of these students in relation to their culture. So, it was felt that the method still had value. Some of the dilemmas faced would need to be investigated during the analysis of the data.

9.3.2. Discourse identification and conversational style exploration

Focus group methods of analysis are not standard and likewise there are no standard techniques for discourse analysis (Van Dijk, 1985b). The methods used here followed to some extent that of Levinson (1983). Analysis included two stages which are described below. Before presenting these two stages I shall draw the specific framework of this analysis on the basis of the discussion in the foregoing sections.

Specific framework of this analysis

In reviewing the study of conversation analysis (CNA) I have compared it with discourse analysis (DA) and made a special reference to contrastive analysis. As the present study can be considered a cross-cultural one in the broad sense, it will apply some kind of contrastive framework. Contrastive DA seems to be most common in its comparison of the interpretation of speech act types. However, it is also pointed out that it is limited by its inadequacy to cope with the sequencing acts of conversation a problem which is crucial to studies of culture. From this viewpoint conversation analysis, which is derived from Ethnomethodology, can be complementary to DA in terms of its powers

to express conversational features which are related to cultural differences.

I also listed some features of conversational behaviour which are of contrastive interest. They are, for example, overlapping/interruption, pause/silence, and choice of topic, all of which are related to the management of conversation. It is also noted that the use of these features should be interpreted in relation to the values connected to them. Thus, the contrastive framework in this study involves not only comparison of the physical conversational features but also of the values attached to the use of each feature. Thus, use of the same features to a different degree in different circumstances would certainly reveal the conversational style of the culture of that group.

Sacks, from an ethnomethodological perspective, concentrates on the study of natural conversation, discovering 'how its structure and resources reflect speakers' social knowledge'. By introducing the 'category-bound activities' he has succeeded in describing how 'our knowledge of social structure' is utilised to interpret every day discourse (for a review see Murata, 1994).

The framework for this study is formulated in consideration of the characteristics and problems of both CNA and DA. It will utilise the practical reasoning based on 'common sense knowledge', which is specific to members of the Greek culture; thus, it is culture specific. I shall deal with linguistic interests such as 'coherence of texts' and the 'limitation of semantic fields' (1972a, p.325) but interpret them giving attention to the students' knowledge of Greek culture. The analysis in this study will be supplemented by features of the dynamic nature of the conversational discourse as a process.

9.3.3.Stage one analysis

The initial phase involved an immersion in the data. Prior reading of related literature on DA and CNA and multiple readings of the transcriptions resulted in the first level of coding which included a careful sifting out of themes, a searching of patterns, both of consistency and variance and an exploration of the conversational style and its relationship to the culture of the members of the groups.

The testing of categories against the data is described in the grounded theory work (Sinclair et al., 1975). Fourteen such categories or themes were initially generated and coded: Ethnic Identity (ETHID), Greek Culture (GRCULT), Greek School (GRSCH), Modern Greek A-level (GRAL), Greek Language (GRLUNG), Greek friends (GRFR), gender (GEN) , family (FAM), Greek customs (GRCUST), marriage (MAR), job (JOB), education (EDUC), Greek community (GRCOM) and Greek History (GRHST). The transcription of this conversation was read again and the talk which responded to these categories was marked.

There are no clear guidelines on how to identify units of discourse, or what constitutes the natural boundaries of selected units. At this stage the identification of the topic boundaries which can be used in CNA was quite useful. To identify TRPs (Transition Relevance Places) or topic boundaries (although they do not necessarily coincide), discourse analysts have introduced the concept of discourse markers (Sinclair et al., 1975). However, TRPs and topic boundaries are signalled in more complicated ways and need to look at a higher level of the organisational scale.

For the purposes of this analysis we shall employ an operational

definition of topic boundaries by, firstly, dividing the conversational interaction into topics based on the general notion of topic: ‘what is being talked about’ (Brown and Yule, 1983) or according to ‘radical shifts in the overt topic of the conversation (Labov and Fanshel, 1977, p. 38). In addition to that, the unit of subtopic will be introduced, when a slight topic shift is observed within a topic boundary. Cohesive links will receive special attention in finding topic boundaries although we have to bear in mind that topic shift is possible even without any breaks in cohesive links (Murata, 1994, p. 167). Then , all the frequent topic boundary indicators will be listed and those with high frequency will be examined. The results will be reported together with the rest of the findings.

The excerpts concerning the different discourses were phrases, sentences, paragraphs or exchanges in the conversational style of the group members. Some quotes fell into more than one category: in this way discourse analysis differs from content analysis which focuses rather on discrete frequencies. All the instances of each category were then collected together and totalled for each group. See the table below for total number of quotes identified in each category for this group:

TABLE 2.1.: Number of quotes per category and per group

disc	*	GRCUL	GRID	GRSCH	GRAL	GRLAN	GRAL		
prvd	*	1 - 2 - 3	1 - 2 - 3	1 - 2 - 3	1-2-3	1-2-3	1-2-3		
quotes*		15-13-11	7 -5-3	10-8-8	5-6-4	6-5-3	12-11-10		
disc	*	FAM	GRCUST	MAR	JOB	EDUC	GRCOM	GRHST	GEN
prvd	*	1-2-3	1-2-3	1-2-3	1-2-3	1-2-3	1-2-3	1-2-3	1-2-3
quotes*		16-15-9	3-4-3	4-5-3	6-5-6	6-5-3	3-2-1	5-3-1	2-3-1

The text was then read through again to see if additional categories needed to be generated at this stage. The marked sections were photo copied, extracted from the text and grouped together for categories. The original texts were checked again for possible omissions and reclassifications.

The texts were then read again for a closer look at the conversational style. This was not an easy task as the transcription of such sensitive conversational features as interruption, pause, overlap, repetition, silence or hesitation was not always straight forward to spot. These features wherever clear, were marked and then classified in the same groups that were used by Murata (1994). The numbers, the types and the frequencies with which they appear in the different groups will be discussed in contrast to the discourse of 'Greek Culture' that was identified in the groups.

9.3.4. Stage two analysis

After several readings of the groups of coded text and experimenting with different combinations, two major discourse fields emerged, which seemed to best fit and make sense of the material: one concerning Greek culture, one concerning the Greek school. These two discourses were very relevant to the main research question which generally is to identify the effect that Greek school (especially Modern Greek A-level) has on the Greek culture the students share and, consequently, on the formation and maintenance of their Greek identity. Close to these two discourses were the discourses of family and peers

which seem to be significantly important for this investigation. In order to identify their relevant importance and their effects, dominant, minor and contradictory discourses and their possible connections were mapped and relevant quotes were picked from the text group accordingly. Again, those parts of the text excluded from this process, were checked for bias.

After several reworkings, a final version was developed and quotes selected to illustrate the discourses. These selections were made according to consideration of their theoretical appropriateness and their possible practical application. Finally, I returned to the original texts to test the interpretations which I had generated within their content and to check possible distortions and omissions.

Although I had been guided by the literature and my experience to predict the broad categories of Greek culture, Greek school, parents, and peers, too little work had been done in this specific field for guidelines on what to expect from the micro analysis. To complete the above process, I returned to the broader context exploring the significance of these discourses by comparing them to the mainstream academic discourses and the results of the relevant section of the questionnaires. I also searched for unexpected emphases and silences as well as other conversational features, tried to understand seemingly problematic stances and reflect on the whole procedure and the conversational style (Parker, 1992, Murata, 1994).

The process of discourse identification highlighted some complex aspects of the research. Firstly, although my initial intention was to 'search for the maintenance of Greek Identity, those discourses associated with the notion of Identity were not 'easy' or 'clean' to identify and they were not too many. The topic of conversation mostly

referred to Greek culture and Greek origin. A special reference was made to Greek identity, however, which was treated as a subtopic. The discourses of Greek culture, on the other hand, seemed more clear-cut, obvious and discrete. The discourses related to Greek School and peers were generally clear and easy to identify, while those of family were not always as straightforward as the previous ones, although, in the end, it was quite easy to identify them in the other mainstream discourses. This will be clear in the presentation of the discourses below.

Furthermore, the process of crystallising discourses had an arbitrariness which created different emotions. Firstly, there was the sense of imposing an idiosyncratic and pre-existing notion of a structure, and thereby distorting associations and simplifying relationships. There appeared also questions about the representativeness of selected quotes and mostly on how one weighs the position expressed by only one group or a person within a group, or the force/frequency with which a position is expressed. I also had to face the problem of extracting phrases, sentences, exchanges from their specific context within the sequence of a particular group (Silverman, 1985). Sometimes I had to deal with the different relationships speakers expressed towards a specific discourse by interpreting the difference e.g. between 'we do' and 'I do' or 'students do'.

Before proceeding to describe the findings as outlined above, I will focus on the group process in order to explore the role of contextual factors in the generation of discourses and the formation of conversational style. I will try to give an overall picture of the students that participated in the three groups and compare them across a possible number of variables. The groups will then be analysed for the

conversational features of the speakers and the impact of me as a facilitator.

Description of the sample

The age of the students in the samples ranged from 16 to 18 years of age with an average of 17 years in the total number of each group of students. Two of the participants in the first group clearly had the Greek language as their mother tongue and felt comfortable to speak, almost always, in Greek. The rest felt more comfortable to speak in English, although, sometimes, and in a certain 'Greek Culture' context they changed into Greek, turning back to English very shortly. As far as the gender of the persons that participated in all groups, is concerned there were more males than females. Their percentages were similar to those of their participation in A-level classes (60% males and 40% females)

Analysis of the group process

This phase of the study involves investigation of features both across and within the groups. This process will help to contextualise the later analysis of discourses and the related factors of the conversational style.

Although the literature on focus groups has suggested that it is preferable for group members not to know each other, Murata reviews Kitzinger (1990) who found that there were advantages in using pre-existing groups, such as a higher overall output.

Several points may be made on the gender composition of the groups and their responses. There were not significant differences in the

composition of the three groups. This is a point we cannot deal with at the moment, however. Although gender differences were not the focus of the study, we could mention an interesting issue at the moment, which is reinforced by what Murata, 1994, claimed about the differences in the interaction style of male and female in mixed groups. According to Murata variations of the output and content can be expected.

The role of the researcher/facilitator

In searching for the inputs of the researcher/facilitator, it was evident that I drew on many guidelines and principles from the enabling questions I had prepared as well as from my experience as a teacher. These included promoting open-ended discussion by as many participants as possible. The type of interactions were not significantly different amongst the three groups. The differences could be found in the frequencies of their use mainly.

The first group of facilitating interruption referred to the promotion of open-ended discussion in the groups:

R: What do you have in mind when you talk about 'Greek culture'?

sometimes requesting clarification:

R: So, you mean that you had taken your decision to work in Cyprus before you started your Modern Greek A level?

trying to include some hesitating/ less assertive students:

R: Sorry, I thought you wanted to say something just now?/ okay (ehm ...)

responding to non-verbal communications:

R: You want to say something, don't you? You seem to agree, don't you?

bringing the focus of the conversation back to the topic:

R: Right, so lets come back to the topic of your school and let me ask you this imaginary question: When you marry and you have your own children , will you send them to your Greek school and why?

testing out further areas of discussion:

R: Ok you mentioned the issue of Greek dancing, are there other issues related to the Greek culture that are important to you?

When exploring intergroup factors, I studied the groups in detail to observe the overall process, the relationship between group members and the facilitator, the levels and type of expression and any other significant factors. When considering problems of my being the facilitator and generally whether this created any issues of power in the group, I kept in mind some arguments and tried to explore the impact of such variables in the process.

Much has been written on the issue of teachers being researchers in or outside their classes and most of what has been written relates to the notion of 'action research'. In this sense, many advocate the idea of a teacher being a permanent researcher of the needs of the students (Taylor, 1987, Murata, 1994). When, however, issues of power are

involved, the problem of the teacher of the groups being a researcher in each specific group, is faced in contradicting ways. This fact is related to the pedagogic relation of the teacher and the students and I shall not go into the details of this huge, though important aspect. I certainly was not the teacher of the students in the groups, a case that seemed to make things more relaxed. I believe, however, that my experience as a teacher in the G.S.S. significantly helped me in my effort not to inhibit the research process.

As I was interested in the impact of my presence on the kind of discourses which were voiced and those which might have been silenced, I tried to find any element of a 'you' and 'us' positioning. They did not seem to consider me as being different. Sometimes, however, there seemed to be the distance which usually occurs between researcher and subjects. I shall consider in the main analysis any suggested discourse of social position. Their relative silence in their accounts about, for example, their school or their teacher and more detailed aspects of insider experience will also be considered.

Features of conversation and language

The conversational style and the nature of the talk which the groups utilised was interesting. There has been a variation in flow of speech: from lively conversation with some over talk to small responses to questions, little debate among the participants and at times possibly resistance to contribute. Below we present one example of each case:

"I have enjoyed doing this A-level... It has finished now... I have learned many things about my Greek culture... Greekness... and I shall have this A-level as an extra qualification as well... yes... I do not think that this provision made me feel more Greek... yes, I agree... My family...

parents,grandparents... gave me this feeling and I shall always have it inside me. What this provision offered... was to make me more aware of what we mean by Greek culture.”

“ R: Why do you like this place?

DF: Because we meet a lot of friends , the people are different. They do know you and they speak the same language as you do.

R: Yes A, you want to say something?

ANM: I agree.

R: You L , do you agree?

LAM: I think that this school helps us anyway....

R: Yes?”

The different variation in the flow of the conversation in the groups is interesting. We shall compare these variations within the groups when we present the different discourses. There was also a difference in the conversational style of the persons involved and probably of the use of the topic. In one case two of the students involved spoke in fluent Greek and most of the interruptions were made by those two individuals. They both had very strong views of their ‘Greekness’. In the second group there was a girl who had very strong ideas on her friendship with other cultures and she gave rise to a debate. A boy in the last group also acted as a ‘debate facilitator’ when he expressed his views on going to settle in Cyprus.

The variance in the flow is related to the system of turn-taking and the issues of ‘overlap’, ‘interruption’ and ‘silence’. There are some examples of these in the extracts above. It is also related to the analysis of the sequence of adjacency pairs (see the chapter on theory) in terms of ‘preference organisation’ and generally related to the overall organisation of the conversation and the topic in particular. More detailed analysis of these findings and more discussion will be made in the presentation of the findings of the discourse analysis where the issues from the conversational style will come to

complement the findings of the DA.

7.4. The main analysis

In this section I shall explore the repertoires the students utilised in discussing Greek culture and investigate the range of different positions these youths adopted in relation to these discourses as well the implications of such positioning for the running of the G.S.S.

More specifically I shall deal with the identification of the expressions of the different discourses, their interrelationships and their effects in creating the students' Greek identity. All the above will be utilised accordingly in evaluating the effectiveness of this A-level provision in this respect.

7.4.1. The Greek Culture Discourses

The Greek culture discourse was greatly and strongly related to the Greek identity discourse and both were clustered around four main themes: religion, language, history and customs which I identified as discourses that exist in this conversation. Although, as outlined in the chapter on theory, these categories reflect much of the academic writing about identity, culture and ethnicity, the students of this group revealed some interesting relations toward these dominant discourses. The section below will outline the major stances, as well as some consequences for the students of the G.S.S. and the effectiveness of the Modern Greek A-level provision.

The Greek identity discourse

It has already been mentioned that there were not many clear and straightforward references to this discourse. Interchangeably, the students used the concept of Greek culture or Greekness when they talked of their origin and identity. To use some quotes: ‘... my parents are Greek, of course I am Greek’, ‘... at Greek school we learn more about the Greek culture of course’, ‘I have Greek origin and so... some Greek culture’.

The students in the first group made some very clear and strong statements about their identity. A representative situation of what happened in the first group as far as the ‘Greek identity’ is concerned, is this: the pronoun ‘our’ was mainly used by the students when they referred to their origin. One person in particular used the pronoun ‘our’ quite strongly in the case of expressing his views on his identity: ‘Of course we are Greek. Our parents are Greek, our family ... and then we learn Greek’. The fact that there was no negative reaction to this statement suggests the feeling of ‘common origin’ that existed in that group.

In the second group the use of personal pronouns is varied. There are people who use ‘I’ very often when they refer to their GI (Greek identity). But ‘we’ is also used a lot when they refer to something they all share. Something new appears in this group, as far as the use of the personal pronouns is concerned: the use of ‘you’ when they spoke of their ethnic identity and culture e.g.:

‘I think that anybody who thinks that if you don’t have a Greek A-level, I think...if they don’t think you are like a proper, true Greek if you don’t have a Greek A-level, they are basically stupid. Because I don’t think that you have

to

have a piece of paper, an A-level in order to show, you know...'

In the third group students mostly made personal comments using the pronoun 'I'. These comments, however all shared the same ground : It is their parents who established their origin and those who gave them their feeling of Greekness. Here are some examples: 'I have to say that it is mostly my mother who tells me all the time 'you are Greek...', 'Go to Greek school', 'Learn to speak Greek'. Most people agreed on that comment and one went further by saying:

'Yes, it has been my mother too. It is definitely because she wants to give me the inheritance she has got. She will, then be proud she did her job. The people she knows will respect her, she thinks.'

In all the groups the feeling of *Greek origin is strongly related to their family*. I note that there were no 'opposing statements' by anyone in any group. The above can be seen in the quotes: 'my family gave me this feeling (of Greekness) and I would like to give it to my own children' [1st group]. 'Being Greek is something that you would do... you always meant to be Greek because your parents are Greek and because of the way your parents treat you.' [2nd group]. The quote above is taken from the conversation in the last group. The response to the above comment which was widely accepted was 'This is usually the case with most parents.'

Another quote which refers to *the identity and relates it to family and school* is the one below which is an extract from the first conversation. I think that the fact that this person uses the 'we' expression at the beginning and in the end she adds: isn't it ?, This question tag which receives a rather positive response from the others, makes the reference to the discourse of identity and its relationship to the

discourses of family and school quite strong.:

' If we hadn't come to Greek school we wouldn't know Greek to communicate with our relatives and we wouldn't know so much about our identity which is being Greek, isn't it?'

The participants in all groups refer to *the definition of the concept of Greekness* saying: 'Greek language... Greek history, culture and religion', '... our traditions, our music and many other things', '...they (people at G.S.S.) do know you and they speak the same language as you do', '...we have celebrations and we go to church'. Quite often they link Greekness to their Greek school: 'Greek culture is related to my Greek school. I think that when we come to Greek school we do learn more about the / our traditions and our music and many other things...' . The above 'definitions' refer to the 'very doings of the members of a culture' or 'observable and non observable phenomena of the culture) (see p. of this chapter).

There appears to be a clear *positive attitude* of all the participants in all groups towards the Greek culture and the Greek Identity . Both Greek culture and Greek identity are related to the life in the Greek school and the Greek community in general. One can see this positive attitude in the following quotes which I grouped by provider-group. This grouping will be used below as a basis for the comments on the differences between the three group conversations.

Group One Conversation

'It's good to be within the Greek community and meet your friends'-

'Yes, definitely'

'I shall always have this feeling (Greekness) inside me' 'That's right'

'Of course I do not want my children to turn English'.

One person in this group revealed that her family is 'strict', and made her 'go to church and come to Greek school' but finished by saying 'that is the way, however, that I want to bring my children up too. I will not, however, push them do things they do not want to' (others in the group agreed).

Group Two Conversation

'I think that being Greek, especially being welcoming and nice to other people is great'

'I am experiencing one religion in my house and one nationality and I like it'

'I think that if someone is Greek, I think that it is actually relevant to come to the Greek School, and I like it anyway.'

Again, there were complaints by one female participant that 'The Greek parents in England have stayed behind... they put pressure on their children...' But she did not oppose to whatever culturally related events they wanted her to participate in. She was definitely against the fact that they 'made her' do that.

Group Three Conversation

'Yes, yes, I would definitely say ' I am Greek...'

' I quite like to socialise with people of the same origin and learn more at the same time; This is Greek School.'

' Of course I'm Greek. My parents are Greek, I live in the Greek community, I often speak Greek with my Greek friends...'

I should again note that no negative attitude towards the Greek identity

either explicit or implicit was identified in these conversations. Additionally, the information that this study collected via the questionnaires shows that the responses to the attitude scale questions revealed a quite positive attitude towards the Greek culture and their Greek school in general (see relevant section). The differences amongst the providers were significant, however. The statistical tests employed showed that the students of Provider 1 schools had scored higher on both scales. The Provider 2 schools scored second and Provider 3 scored third. All the above will be elaborated upon later. All the above show that the majority of the students in the sample had a positive attitude towards the Greek culture and the Greek identity.

A closer look at the answers the students gave to the open-ended questions reveals that the positive issues of their schools were stated more frequently and more strongly than the negative ones. The students in all schools were rather positive to their Greek school which they appear to value for the 'academic input' it offers them and the opportunity it gives them to meet 'Greek friends' who they 'like to be with'. Underneath the question 'write what you like or dislike in your Greek school' a student wrote: 'I come to Greek school to do my work and get a good grade. Most of the times I enjoy being here because I meet my Greek friends'.

What is of great interest is that the findings in the other types of analysis seem to support what we find in this 'cultural piece of analysis'. Two questions were set in the attitude scale to 'measure' the students attitude towards the 'Greek climate in the School' and the 'Greek climate in this A-level'. Also, there was one question which asked for a ranked answer from 1-5 (strongly agree to strongly disagree) on whether their origin is Greek. The results are described in the 'findings from the questionnaire section' and will be brought

together with the results of the cultural analysis in the last chapter of the thesis. At this stage I must note that the above 'measures' were linked to the students A-level performance in the regression model. They were all significant and positive predictors of the A-level score. If this is supported by the rest of the findings, it might be considered an important educational and policy issue: The cultural and the educational goals of the G.S.S. can to a great extent be pursued together.

One point which is of great importance to this study, as it aims to evaluate the effectiveness of the G.S.S. to help the students maintain 'their Greek identity', is this: There is no clear acceptance or indication of acceptance amongst the students of all three groups that the Greek school and especially the A-level provision created the feeling of 'Greekness' inside them. It is stressed by most of the participants that the 'family put this feeling inside', either by birth ('my parents are Greek, so I am Greek') or by influence or desire ('my mother will...(knock) (her) head down if I don't send my children to Greek school'). The role of the school is to make them 'more aware of what Greek culture is' because they 'learn the Greek language better and more Greek history'. A student expressed her wish that her children will go to Greek school:

' I recommend that my children go to Greek school because I want them to meet with other people of my culture... so that they know about it and be proud about it'

A person in the second group said something that created a discussion which revealed the role of the Greek School as a whole in the creation of the national identity of its students:

' I always felt Greek. Greek school has helped me feel more confident, offered me knowledge. But... I do not think that it is just the Modern Greek A-level that did that. It is the Greek School from the beginning that has helped us...'
' Yes, I agree.'

'Yes, the Greek school has been helping us for years'

The general conversational style in the third group at this stage was not the same as in the other two groups. I must note that the first two groups shared similar styles apart from the fact that the two members of group one who had recently arrived in England had slightly stronger views which they expressed in different ways to the ones that the other members of the group used. The conversation in the third group is not as 'alive' with not many elements of repetition, stress, agreement or disagreement. Also the frequency of reference to the discourse of Greek culture was slightly different (as can be seen in TABLE 7.1.).

A participant in the third group put the issues of Greek school and Greek culture together more briefly and in a different style:

'I think that Greek School and Greek culture go together...
Greek origin is related to Greek culture. That's it.'

It is interesting to see that the findings in the questionnaires support the view that A-level in Greek did not make them 'feel more Greek' . Almost all the students responded negatively to the questions asking whether they feel more Greek after having done this A-level. They even wrote some comments next to the ranked answers like this one: 'I always felt Greek' or 'I know more about Greekness now, ok'.

At this point, I must also refer to the information I collected in the interviews with the teachers and the heads, which, in a way, supports the above findings. They both said that they aim to help the students maintain their Greek identity ' mostly by keeping them close to the community at this important age'. There was also a comment by a head

saying: 'Most of the students that take this A-level come from families that are close to the community and are well aware of their origin...This age is difficult, however. Parents want us to keep them close to the community and give them a qualification at the same time. There are students who are not of high ability... I mean they can not do well in this A-level. We know, the parents know, we have to try, however. We have to keep them here, as well. We think we are doing the right thing.' More information, from the three providers, on this issue is found in the relevant section of the analysis of the interviews.

The discourse on religion

This discourse does not appear very often on its own. When it does it is referred to as 'going to church' with their parents or being 'close to the community and the church' (as this is a church school- in the first group), or 'being a Greek Orthodox'. There is a reference to religion in the other two groups but not of the same frequency, strength or content.

There are two cases that concern the discourse of religion in the second group, both with reference to the way they wish to bring up their children: 'I will take them to church', 'I will teach them the religion I believe in'

The reference that was made in the third group is of interest as it illustrates a different attitude towards that discourse:

'All these years that I come to Greek School I am taught Greek History, Greek Language, ... well, Religion... But you Know. A cousin of mine who goes to a church school tells me that they go to church really often. They are told about the meaning of different customs. You know ..they do not have only agiasmos (blessing at the beginning of the year). .. In the recent years we do more giortes (celebrations), but when I was young we

didn't.'

Whenever the students in all groups talk about Greek culture they use the expressions: 'Greek history, language and religion'. In the further steps of the analysis of the conversations of the other groups we shall search to find any possible differences in the expressions or attitudes towards the discourse of religion as related to the maintenance of their identity.

The discourse on history

This discourse appears more often and is clearly related to the A-level teaching. Students certainly like to learn more about 'the history of Cyprus and Greece'. Special reference is made to the textbook 'Farewell Anatolia' which is based to the events in Asia Minor in 1920. The students in the first group said: '... we came so close to those events, we learned so much about those people, how much they suffered and how they were thrown out of the country they had been living for centuries, how they became refugees...'

The students in all groups also believe that they must learn the recent history of Cyprus and how the Turks occupied the half of the island. In groups 2 and 3 the reference is just 'plain' and short. The first group had a discussion on the issue of how the Turks 'got Cyprus' and so they 'have to do something about it'. They finally all agreed: 'let's hope that the future generation will get it back from the Turks'. I cannot say why the students in the other two groups did not refer a lot to this point. There is, however a real difference in their words and their conversational style. One could say that the students in the first group must have had similar discussions in their classes or, must have been given this attitude from their families.

The discourse on Greek language

This discourse underlies most of the conversation which concerns the Modern Greek A-level and the G.S.S. It is connected to the Greek identity discourse as the members of the Greek 'group' share 'the language, the history, the religion...the customs'. The students themselves want to be amongst these Greek people because as they say 'they know you and they speak the same language as you do'. I have already presented some references on this discourse in previous sections and I shall deal with it when I present the discourse on the Greek school as well. I must mention at this stage that there does not seem to be a significant difference in the way this discourse is expressed in the three group conversations.

What all three groups shared is the fact that they consider Greek language an important issue which is related to 'Greekness', but not a 'necessary condition' for a person to feel Greek. Here are three quotes which reveal this view, one from each conversation:

'I want to speak Greek at home, but I don't feel comfortable...you know. I don't think that this means I don't feel Greek.' [1st group]

'At home we do not always speak Greek...especially me. I answer in English...you know. But we have all the Greek customs, we go to church...' [2nd group]

'I generally enjoy learning Greek. This does not mean that I speak Greek in every day life...well I may in certain cases and with some people.' [3rd group]

The discourse on Greek customs

There are many references to customs and traditions of the Greek community in all three groups. All the references show the positive

attitude the students have towards 'Greek habits and traditions'. These youths certainly distinguish and prefer the expressions of Greek culture to expressions of other cultures and mostly the English one which is the most dominant in the country in which they live. Such examples could be found in the quotes: 'Greek food tastes much better, not just...', 'our wedding ceremonies are real ... I mean you get the... feeling of a real wedding..'.

Amongst the different expressions of Greek habits the Greek dancing and the Greek food get the most and strongest references. We see a connection of 'coming to Greek school to learn ... mostly Greek dancing'. The second group mostly refers to the qualities the Greek people have in their personality: 'It is part of being Greek being welcoming and nice to other people'.

There was also a clear connection of Greek food and marrying a Greek woman to cook Greek food. Here, when marriage is mentioned, the *discourse of gender* is also seen. It is mostly the males speak who freely on this subject in the first group. In the second and third group, females are involved in the discussion but express not so strong views.

The points the males make are quite indicative of the fact that they want to keep their 'superiority and satisfaction' which being married to a Greek woman gives them: 'I am going to marry a woman of Greek origin. Greek women know how to cook. English women...well... you tell them to cook this food and they cook something else'.

Female participants in the other two groups were modest, though not negative towards marrying a Greek man. They also spotted the probable problems of a bicultural family: 'I am not engaged to anyone at the moment and I do not look for boys who are Greek you know, Ha, ha. It

might be easier in the future, however... the same culture' [2nd group]. 'It just comes naturally, you like a person or you don't. I would probably prefer a Greek person... I think it is not so easy to say... but for the kids it is going to be easier. Half-half is hard in a family' [3rd group]

The different celebrations they have at school mostly for the Greek national days could be considered to be an issue which joins the different discourses such as that of history, language and school as well. These festivals are closely related to the discourse of Greek culture and therefore the discourse of Greek identity which is under examination. There is more than one reference to the importance of these events in the awareness of Greek culture. Here is a representative quote: 'Here at Greek school we live the Greek culture more actively. We have the different 'giortes' (celebrations) which we must have, we go to 'eklesia' (church) ... These 'giortes' (celebrations) teach us a lot about our history and culture, we speak in Greek when we participate in these. We really feel we are Greek then'.

This issue of the students participation in the school cultural activities was under investigation in the other types of analysis too (see description of the results). I have commented on the headteachers' and teachers' views on the matter and the differences which exist between the providers. In the statistical test which was used (CHI SQUARE) to test for differences amongst the providers, the results showed that these differences are significant (see chapter 6 of analysis, p.). Also, when the variable 'participation in other activities' was entered in the regression which had the A-level grade as a dependent variable, it seemed to have a significant effect on it. This finding is important as, together with other statistical results, it links the two aims that the G.S.S. pursue.

7.4.2. The Greek School Discourses

The discourse of Greek school has got many and variable references. We could group the expressions of this discourse in the following two major categories: the Greek school as a social and cultural environment, and the Greek school as an educational institution. Below we shall examine the different discourses that appear in these two groupings.

The Greek school as a social and cultural environment

In this section one could include the discourse of friends or peers and that of the community. Both discourses can be seen from the perspective of the student, the family, the teacher, the head and the parents probably. I cannot say that I found all these references in the group conversations, but I did find a lot in the questionnaires or in the other pieces of qualitative work I did for this issue, that is: the analysis of the interviews and the open-ended questions analysis.

The *discourse of friends* is a very strong one and seems to play an important role in the students' decision to attend Greek school. There are a number of quotes that show this fact, just like this one: 'I like coming here and meeting people..' or this one: 'Greek school helps us because we meet Greek friends' [1st group]. In the second group a discussion arose on the point concerning whether their friends should mainly be Greek or not. If we see the findings in the students questionnaires on the ethnicity of their friends, we shall identify significant differences amongst the providers on this matter an issue which strengthens the findings of the cultural analysis.

One person in this second group opposed to the rather 'nationalistic' view (as she said) that her friends should be Greek. Finally, she admitted: 'Of course, I may feel more comfortable with Greeks, but there are people in other cultures that look like us, behave the same....'. In the third group the issue dealt with in a more relaxed way. When a similar comment was made a person almost put an end to the discussion saying: 'I don't bother. I don't check for people's nationality. Ok it is easier when they are Greeks... But I do not think it is a big issue.'

Greek friends are a connection to their Greek culture and, generally, the students feel comfortable to be with them because they 'understand you and you understand them' and 'help you live the Greek culture' and therefore 'know about it'. It should be added here that the same results appear in the analysis of the open-ended questions of the questionnaires. The respondents there state quite clearly that they 'enjoy being with their Greek friends'. More results of the analysis in the open-ended questions are in the relevant section of the analysis. There, many students revealed that the fact they meet their Greek friends attracts them to Greek school.

It also seems that their parents want them to be amongst Greek friends. This is not so straight forward but it appears in a direct way when the students speak about their 'future children' which they want to raise 'in the same way'. They would like them to go to Greek school for the obvious and strong reason that 'I do not want them to turn English, so they should meet Greek people and make Greek friends'.

The *discourse of the Greek community* is faced from an 'insider' point of view and as already stressed positively. The Greek school is obviously seen as 'a small Greek society' where they 'live Greek culture

more actively'. The discourse of Greek community is seen very often in the interview with the teachers and the headteachers. The headteachers expressed the Community's wish that these youths stay close to the Greek community for as long as possible. This, they all stressed, 'goes along with the aims of these schools'.

The teachers admitted that this aim is put forward in the meetings of the committees and in the documents that circulate either by the committees, the Ministry of Education in Greece and Cyprus, or the Coordinating Body of the G.S.S (EFEPE). Some teachers, however, expressed their fears about 'the falling standard of the students in such a demanding A-level class'. Teachers from all three types of schools added something similar to this: 'There are other more 'pleasant' ways to keep the youths close to the Greek community and Greek culture, like, for example, the running of different clubs'.

The Greek school as an educational institution

In this section the discourse of Greek school will be seen related to their Greek identity (something referred to in the relevant section p.), to their future family life, their student life and their working life.

The *discourse of marriage and family life* in general is a strong one and underlies the discussion of the main discourses. Most of the students participating in this group expressed their wish to marry someone of Greek origin (see relevant section) , either (the male) by making the jokes 'Greek girls are prettier' and 'they can cook' or by saying that there will be more understanding in such a marriage (female). One person in the first group said something which shows the link between the Greek school and marriage:

'I was surprised once when I heard my father saying 'I wish my daughter finds a Greek boy there at Greek school.'

Greek school is related to their future family life also because it gives them the opportunity to speak in Greek to anyone that does not understand English. As one person said: 'I can speak Greek with my relatives' [1st group]. A student in the second group stresses the fact that he would send his children to attend Greek school because he wants them to speak and Greek, and thus, not be absorbed by the strong British environment.

Clearly the students see this A-level as a way of improving their average marks to 'enter *Higher education*' and as an extra qualification to get a job. Some of these students expressed their wish to work in Cyprus or Greece in the future either because they 'like to live there' or because, 'in the future, if there is unemployment here, we could go to Cyprus or Greece and work' [1st group]. In the second group, apart from the reference to entering Higher Education, there was a stronger and repeated reference to the students' wish to go and work in Cyprus or Greece. In the third group the major reference regarding the usefulness of the A-level certificate was 'to get a job in the local-Greek community labour market.'

These findings can be linked to the answer the students gave in the questionnaires on 'what they want to do with the Modern Greek A-level'. Again the differences amongst the providers are significant on this issue. Additionally, as already explained, the three group conversations revealed a different attitude amongst their participants on the usefulness of their A-level certificate. Any information collected on this issue will be discussed in the final chapter in relation to the Human Capital Theory.

In general, students want to do this A-level to improve their knowledge in *Greek History*, in particular through the provision in this A level since they believe that they become more aware of their Greek identity and thus they become more responsible individuals. As the ones in the first group mainly say: they themselves ought, as well as 'the future generation', to do something for the occupied Northern Cyprus.

9.5. General Comments

The first thing to note is that this not my main piece of work and, thus, it is relatively short and its value is complementary. Consequently, its strength is that it complements the rest of the work and gives another dimension to it. At the same time it makes this study more comprehensive in terms of aims, tools and results. I have used this cultural analysis to evaluate the G.S.S. in terms of their aim 'to help the students of Greek origin maintain their Greek identity'. At the same time it has helped me to complement any weaknesses of the rest of the analysis. It offered additional information on the school ethos and climate which is a very important factor to the effective functioning of any school.

The above analysis has firstly revealed that the Modern Greek A-level provision in the Greek supplementary schools did not seem to create the Greek identity feeling inside them. This feeling appeared to be generated by their family. It was established by birth, since their parents were Greek, and was cultivated by the 'way' Greek parents treated them.

It was also stressed by the participants that the Greek school offered them the awareness of Greek culture through the learning of the Greek

language and history and through the experience of participation in events like church and national celebrations. It was not, however, only the A-level course that did that but 'Greek school from the beginning'. These groups of students generally believe that the school also influences them through the 'Greek community and Greek friends' environment. They clearly stated that they 'live what Greek culture is about' .

These points are not stressed equally in all three group conversations. The finding that the students believe that Greek school did not create the feeling of Greek identity inside them, gives some complexity to the issue of 'creation and maintenance of Greek identity'. At the same time it makes it more interesting, however. It also brings about a very important educational point since it raises questions like the following: 'School is nothing in this respect without what is outside'. If these students bring their 'Greek identity' with them, what is the role of the school? Shouldn't we then identify what exactly is carried inside the school from what is outside? If the Greek identity did not exist, the school could not extend or enrich it?

It seems, as the above analysis showed, that school is not a key factor in creating Greek identity. Its role is to sustain and model it. 'Greek school has made us more aware of what Greek culture is. Here we communicate in Greek and we live in ... the Greek way.' In which way and to what extent school strengthen the Greek identity could be a piece of a major study. This study found that the real cultural aim of the G.S.S. is to strengthen the national identity of the students by giving them the *knowledge* and the *experience* of Greek culture. The knowledge is offered through the teaching of the language, the history and the literature. As a result, the effectiveness of the schools in this respect is related to their effectiveness in the A-level course. The experience

of Greek culture is offered in these schools in the other activities they pursue (dance, songs, celebrations, and church). I have dealt with these points in the relevant sections of discourse exploration.

Consequently, this cultural aim of the G.S.S. is pursued together with the educational aim. The two aims are interrelated and, therefore, the effectiveness of the schools in both aims is quite similar. The statistical tests undertaken support with this finding. Additionally, there appeared not to be severe complaints by the participants in these conversations about the effectiveness of Greek school in offering them 'Greek culture'. Supplementary information from the other types of analyses I did proves that some 'policies' can be considered not so effective in doing so, although they are not very strongly opposed to (e.g.the participation in the school celebrations). In the next chapter all the findings will be brought together and discussed upon in an effort to make some conclusions which could be of interest to educators and policy makers in this specific field of educational provision and maybe in the field of education in general.

PART C

DISCUSSION

CHAPTER TEN: Discussion

10.1. Introduction:

This chapter aims to bring theory, methodology and empirical work together in an evaluative framework. In doing this, it will first summarise the findings of the empirical research. Then it will discuss these findings taking into consideration the theory and the empirical work discussed in chapters two, three and four. Finally, it will draw conclusions that could be of interest and help to the educational policy-makers, not only in the sector under study but also educational policy-maker more generally.

10.2. Differences in the effectiveness of the Greek Supplementary Schools in the study

This part of the thesis presents the evidence with respect to the main research question: Are there any differences in the cost-effectiveness of the provision of A-level Modern Greek in the Greek Supplementary Schools of London? Since these schools pursue two goals at the same time, this research has aimed to find their cost-effectiveness in pursuing both of these goals.

The first aim of these goals refers to the educational attainment of their students, and, more specifically, relates to their performance in the A-level exams. The second aim concerns the cultural influence of the G.S.S.. It mainly refers to helping those students of Greek origin who live in London to maintain their Greek identity and culture.

Regarding the first goal, the study tested the cost-effectiveness of the

different schools of the sample using a value added method. The value added was calculated by holding the GCSE score in the regression equation as a control for the students' intake. The coefficients shown then mainly incorporated the influence that the schools had on the students' achievement. Initially there appeared to be differences in the performance of the students of the different schools, which could not be explained only by the individual data.

The next step was to find out any possible reasons for these differences. I tested for this using individual level and school level data. In testing for factors that may influence the cost-effectiveness of the G.S.S. at this level I had in mind the supplementary research questions which were described in the methodology chapter. These questions are summarised in the diagram below which shows the groupings and the relationships amongst the variables which were tested for the effectiveness of the G.S.S.. This diagram represents the model which underpins this study

TABLE 10.1.: The model used to monitor the effectiveness in this study

EDUCATIONAL PROVISION IN THE G.S.S. (A-LEVEL)			
	INPUTS	PROCESS	OUTPUTS
non	Student (sex, age, ability)	Student (effort, expectations, attitudes)	A-level grade
school	SES (Parents' occ.. and ed. accommodation)	School (ethos and climate)	
inputs		Heads (organisation and management)	Cultural identity
		Teachers (teaching method, moral)	AND AS OUTCOMES
school	Resources (direct&indirect costs)		Higher Education
inputs	Teachers (sex, age, qual.)	Heads (sex, age, qual.)	Job opportunity

Note: The SES expresses the Socio Economic Status of the students

10.2.1. The inputs as factors influencing effectiveness

The Student related inputs

In the statistical tests at the individual level data I found out that the GCSE score which was used as a measure of the student intake was, indeed, a very significant factor in the regression equation in which the

A-level grade was held as a dependent variable. The R square equals 0.28, which means that the GCSE score on its own explains 28% of the variation in the A-level score. When the GCSE score was entered together with other variables, it picked up the effect of most of the SES variables and of most of the personal characteristics of the students variables. The only two variables that remained independently significant were the gender effect and the mother's education. The analysis of the data showed that the boys are expected to do slightly worse than the girls in the A-level Modern Greek exams (coefficient 0.55). It also showed that the students whose mothers have graduated from tertiary institutions are expected to perform better in the exams (coefficient 0.58). The value of the R square when these variables are included rose up to 0.34, which means that the explanatory power of the model became higher. Other variables explained about 8% of the remaining variance.

At the school level, there was a variation in the results amongst the schools even after controlling for the student intake. A closer look at this variation at the school level had to take into consideration the type (or provider) of the schools as well. When the provider dummies entered the equation they picked up most of the school level variation in the A-level results. They also picked up the gender effect and the mother's education effect. It appeared that the girls, who do slightly better in the exams, choose the schools which perform better and that the educated mother's influence is mostly related to influencing the choice of a type of school.

The detailed analysis of the data collected showed that the type of school is a very significant factor in the performance of the students in all but one school. Church school students, apart from those in one school, generally performed better in the exams. The students of the

Independent schools did slightly worse than church schools and the students of the OESEKA schools performed less well than the students of the two other types of schools.

The cost as an input

When I tested for the cost-effectiveness of the G.S.S., by inserting the cost as a variable in the equation, the results were interesting: cost was not a significant factor on its own. It was found to be closely related to the type of school. The most effective schools were generally the cheaper ones. Spending more does not necessarily improve the performance of the students. We tested for the significance of the teacher’s salary as a cost variable, the results were similar. In the table below we present the average cost of the three types of schools to illustrate the point:

TABLE 10.2.: The average cost per student per provider for the course (in pounds)

Provider	Church	OESEKA	Independent
Cost	1800	1900	2200

Chapter six which presents the results of this analysis, discusses the comments of Hanushek who summarised the results of many studies on the influence of educational spending on students’ performance. There were some studies which showed a negative effect of educational costs. In his most recent study Hanushek et al (1996, p. 106) points out that:

'A growing body of research casts doubt on the effectiveness of school districts at turning added resources into higher student achievement'

The negative effect of cost on the effectiveness of the G.S.S. can always be considered a result which is worth further investigation. Could the reason for the 'negative effect' of the expenditure on the performance be due to the 'better use of the money', or to other organisational factors? The other types of analyses I undertook throw some light on this question. This will be discussed below.

During the interviews some teachers from church schools commented on the fact that they are not paid well. They added, however, that they still want to work at their school for many reasons but mostly because it is a church school. The head teachers of those schools recognised that the issue of teachers' salaries has become a problem (as they keep complaining about it), but said that they can not solve it. Most of them added that their 'teachers are good teachers, however'.

This attitude of the teachers was not the same in the church school which did not perform so well. The teachers in this school were more 'disappointed' with their payment and related it to the lack of good and firm management in the school. One added 'They expect a lot from us and they give so little. They do not treat us well.'

Teachers are considered to be the key inputs in the education production which takes place in the classrooms in most school effectiveness research (Chapter four), and the recruitment and the financing of teachers are clearly important background factors determining the success of the school system (Hanushek 1972, Hoffman, 1993). In this study, however, it seemed that the salary itself was not a factor affecting effectiveness. The teachers with higher pay

did not perform better. Perhaps the best way to express this finding is this: it is probable that other factors than salary influence teachers' effectiveness. The amount of money the teachers are paid is not their only motive. Dedication to a particular school or to a particular type of school seems to be a very important factor. Also what the teachers did for the rest of the week might be a factor worthing further research.

Could it, then, be that the 'good use' of resources in the more effective schools, is actually reinforced by the dedication or the type of responsibility of the teachers? Could these two factors both affect the students' performance and thus the school effectiveness? Of course, other factors might be responsible as well, jointly or individually. Below, I shall comment on the qualifications and the personal characteristics of the teachers as possible factors affecting their effectiveness as well.

Characteristics of the Heads and the Teachers as inputs

I tested for the influence of the variables which referred to the teacher characteristics, at first, without having the dummy school variables in the regression, that is excluding the school effect from the model. It generally appeared that the teachers with more qualifications were more cost effective. However, this was not the case with teachers holding a Ph.D. The relevance that the qualifications of the teachers had to the teaching of Modern Greek A level was also a factor which was tasted in the model. This relevance appeared very significant to the students' better performance. This means that the teachers who have a degree in Greek literature were more cost-effective.

The teachers of the age group over 45 were likely to be more cost-effective. Also, the teachers who had teaching experience of their

subject of between 5 and 10 years seemed to perform better.

The students of the female teachers are expected to perform better in the exams as the coefficient of this variable was positive when tested without the school dummies in the model.

The most effective head teachers were the qualified males of age 55 and over with more than five years experience in the G.S.S..

The results with heads and teachers are based on very small numbers. The fact that they are significant suggests that there is a link between the performance of the teachers and the A level grade. The effects of the teacher's characteristics can not be easily separated as independent. However, the number of the A-level Modern Greek teachers (that is the whole population) is not very high (between 25-30).

10.2.2. The process variables as factors to effectiveness

Student related factors

As elaborated in chapters three, four and five on theory and methodology, the views and the perceptions of the students on aims and the effectiveness of their school may influence their results. It is a general belief that the A-level results are but one measure of the effectiveness of the G.S.S.. The perceptions of the interested groups are likely to be more related to the cultural role of these schools and the teaching of the mother tongue to students of Greek origin. The students, however, seem to have quite clear views on this matter. They acknowledge the fact that as Greeks they 'have to' take this A-level. But they also mention the usefulness of this certificate in their future life. In the questionnaires the majority said that they want to use this

A-level to help them enter higher education or get a better job. No one denied the necessity of obtaining a good pass grade as a means of having opportunities and status in their future life. This goes along with the human capital theory (e.g. Schultz, 1963) which claims that individuals invest in education for future pecuniary and non-pecuniary benefits.

Young people who take the Modern Greek A-level consciously invest in both, their future studies or future occupation. At the same time, they do what their family and close community wants them to do. This community could be their future employer as well. Apart from 'offering and receiving Greek culture' there might be a different kind of a 'give and take' in this close community which could be a topic of future research. From an organisational perspective, it seems that all the participants who are involved in this type of educational provision share similar views about its purpose. This agreement on the goals is, again found to be related to the effectiveness of any educational provision (Mortimore, 1995)

The clear impression I got while undertaking this study was that in schools like the G.S.S., which do not operate during normal schooling hours, pupils need stronger motives to attend. The opportunity cost for these young people was very high. They had to forgo their free time on week day evenings and Saturday mornings or afternoons in order to attend these classes. They were giving up either the opportunity of earnings or their own leisure time.

Their relations with other students may play an important role in the students' attitude and therefore attainment as well. The analysis of the questionnaires showed that the majority of students enjoyed the fact that they met friends in their Greek school. The distribution of the

answers to the question seeking answer about the students' relations to their Greek friends in the Greek school was quite similar to the one of the examination results: in the schools where the students performed better, they reported 'meeting Greek friends' more. The view the students have of their teacher was also tested for relevance to the A-level results. In more effective schools the students had a better attitude towards their teachers.

As far as school discipline is concerned, no serious problems were reported in the students' questionnaires. Generally, there did not appear to be a serious discipline problem in this course. Neither the teachers nor the head teachers reported serious discipline problems and stated that those students who finally take the course 'want to get along well with it and, therefore, present no discipline problems'. The differences of this variable amongst the three types of providers was found to be significant at 10 per cent in the CHI square test, but the differences were not large ($p=.09$).

A factor which was found to be very significant in this regression model for the A-level grade, was the students' work satisfaction (the level of satisfaction they get from the work they are given). Whether this is an input or an output of the educational process and a school input or not, could be a matter of debate. However, it is interesting to note that, in schools which performed better, students tended to be more satisfied with their work. They were also more satisfied with their subject, their school and with their teachers. In addition the students in these more effective schools reported that they believe in both of the aims of the G.S.S.

Schooling related factors

The findings which are related to the school ethos, the organisation and management of the school and the Heads and teachers are presented here.

In schools worked for more hours and more teachers were time tabled for teaching this A-level , it was more likely that the students had better results in the exams. When I tested for the effect of class size in the educational provision of this level in the G.S.S. of London it seemed that in classes with 5-10 students they performed better than in classes below with 5 or over 10 students.

The next research question of this group of organisational factors refers to the influence of the establishment of the coordinating body (EFEPE) on the provision of A-level Modern Greek. I cannot claim that I had very strong evidence of the effectiveness of EFEPE in A-level provision. Many interviewees (teachers and head teachers), said that some of the decisions taken by EFEPE helped for the better organisation of the G.S.S.. An example is the setting of a higher age for entrance on the course. These actors in this educational provision have got more expectations from EFEPE. They mostly referred to the support of the preparation of teaching materials. They also mentioned the setting of a minimum qualification for teachers. It seems that the influence of the coordinating body is still weak at this stage. More is expected of EFEPE in the near future for the improvement of the provision.

In management, most of the results are well established factors in the effective school management literature (Hogan, 1992, Hutchinson, 1993, Mortimore,1995). For example, in schools which performed better it seemed that the head teacher was involved in the appointment of

teachers. In those schools there were also more regular gatherings of the students where the head teachers referred and strongly reminded the students of the two goals of the schools.

The most cost-effective schools were also the ones which held more regular meetings of the staff. They held different kinds of educational seminars for the staff as well. No problems in cooperation were reported by the staff in the most effective schools. Such problems, however, were indeed reported in two schools which were ranked below average on effectiveness.

10.3. The cultural aim of the G.S.S. and its relation to the academic aim

The second part of the main research question referred to the effectiveness of the G.S.S. in helping their students to maintain their Greek identity. I used discourse analysis with some elements of conversation analysis to analyse three conversations with groups of students. The detailed results of this analysis are presented in Chapter 6. Here, I repeat the main findings and relate them to the ones which are associated to the first part of the research question.

The general view expressed by all groups was that the school did not create the 'feeling' of Greekness inside them and did not offer them the first experiences of Greek culture. It was the family that did this. The Greek school made them more aware of the Greek culture by offering to them more knowledge and more experience of it. All three groups accepted that this knowledge included the Greek language and history. The group from church schools spoke very strongly about a knowledge of the Greek Christian Orthodox religion as well. The experience included

the participation in culturally related activities that were held by or supported by the schools. It also included the experience of socialising with people of the same culture. The above statements are supported by the data in the conversations and, at the same time are backed up by the data in the questionnaires and interviews.

In my effort to draw some conclusions on the role of the school in helping 'culturally' these students of Greek origin, I took into account the statement of the conversation participants *that the Greek school makes them more aware of what Greek culture is and also reinforces it, through offering more knowledge and experience of Greek culture*. Since this finding was repeated in all three groups of students, from the three types of schools, it is very likely that this is indeed the situation. This did not contradict the findings from the interviews. The teachers and the head teachers believed that they 'keep the young people close to the Greek community and Greek culture', so that 'they learn the Greek language and history', 'they participate in many cultural events', 'they can join the Greek club, learn Greek dances and songs' and at the same time 'they also get acquainted with Greek literature'.

As I commented in Chapter nine, the issue whether the school creates culture or cultivates and broadens the culture the children bring with them, is a very important educational question (Sanders, 1992, Kress1993). The participants in the conversations provided evidence which support the second part of the statement, that is that the Greek School cultivates, broadens and reinforces the Greek culture the students come to school with.

The study investigated how the two 'outputs' of this educational process, that is the performance in the A-level exams and the Greek culture, were related. In doing this it used the information and the

results it had from the other types of analyses. The findings from the interviews have already been presented (chapter seven). Below, some of the findings in the students' questionnaires which are related to the effectiveness of the G.S.S. in their cultural aim will also be elaborated on.

The information collected on aspects of the school which are related to the Greek origin of the students were coded and statistically tested for any significant difference amongst the three types of schools (chi square test). Most 'variables' which were found to have significant differences amongst the three providers (they are listed in chapter eight) also appeared in different discourses in the cultural analysis. That is, discourses and aspects of conversation related to these differences were identified in the analysis of the conversations. These discourses/aspects, however, had differences in the way they appeared in the three conversations. These differences 'agreed' with the findings of the chi square tests. They even 'agreed' with the findings of the inferential statistics.

Two representative examples are given to illustrate the agreement of the findings in the different types of analyses. Then, a list of the other potential factors for effectiveness is presented. It is clear that these factors are similar for both aims that the G.S.S. pursue. Since the presence and influence of these factors is closely related to the provider of each school, the assumption had to be made that the factors with significant differences amongst the providers could count for the different findings in the three conversations with groups from the different providers.

The first representative example presented has to do with a measurement of attitude: The attitude of the students towards the

Greek culture or Greek climate in the Modern Greek A-level. The chi square tests showed that the differences amongst the attitudes of the students of the three providers were very significant and correlated with their examination results. This variable (the students attitude towards the Greek culture and Greek climate) was found to be very significant in the regression model of the A-level variable with a positive coefficient. We could, therefore assume that the schools with the highest performance in the A-level exams were the ones with the most positive attitude of their students towards the Greek culture in this provision.

The second example refers to the finding of the analysis of the open-ended questions that 80% of the students like the fact that they meet and make friends in their Greek school. This variable was also found to have significant differences amongst the three providers. When tested for significant effect on the A-level performance it was found with a positive significant coefficient. It could then be the case that in most effective schools, students liked the fact that they met Greek friends.

Other 'variables' were also identified in the analyses of the data and can be considered as related to the 'cultural aim' of the G.S.S.. These variables showed significant differences in the chi square test for the three providers. They can, therefore, be related to the better performance of the students in the exams. These variables are:

- * what the students like in their schools and what they do not like (Greek songs and dances, events of social and ethnic kind)
- * their attitude towards the subject and
- * their attitude towards the school.

Also, the schools which offer more cultural activities to their students

are likely to have better results in the exams. The students, in general, like the Greek songs and dance. Most said that they like 'meeting friends' and 'people of the same culture'. Some students in church schools said that they like attending the church service if there is not too much time devoted to it.

The attitude towards the subject of A-level Modern Greek and the attitude towards the school, as well as the attitude towards the Greek culture in this A-level, could be correlated to other factors too. However, the picture of the distribution of these answers is not very different from the picture of the distribution of the grades. It could, therefore be that the Greek culture, the subject of Modern Greek A-level and the G.S.S. affect the students in similar ways.

In conclusion, the main finding, which brings together the two aims of the G.S.S. and thus the two parts of the main research question together, is:

The cost-effectiveness of the G.S.S. in providing the Modern Greek A-level is correlated their cost-effectiveness in helping the students of Greek origin to maintain their cultural identity .

It seems that the schools with the better educational performance are the ones which offer the Greek culture to these young people more successfully. In economic terms we could say that the academic and the cultural goals are 'joint outputs' of this educational provision.

10.4. Some qualifications

In Chapter five of methodology the qualifications taken to carry out this research were elaborated upon. Here the most important of these

qualifications are repeated. The first is that the size of the sample and the type of analysis used do not always allow for strong and generalisable conclusions. A test for co-variance amongst the variables which seemed to be related was carried out and the results were taken into consideration accordingly. A reference to a 'tendency' relationship, or a likely effect can, therefore be made in the discussion of the results.

The application of a cost-effectiveness analysis in this study identified many issues, some of which are specific to this particular type of research and some which are more general. Whether this analysis is the most appropriate one in examining this particular type of education could be a matter of debate for all that are involved in it. I have already elaborated upon the possible usefulness of such a study to all the funding agencies: the governments of Greece and Cyprus, the Church and the different parents associations and committees.

The procedure of calculating the costs of A-level Modern Greek provision in order to appraise its cost-effectiveness threw some light on this issue. Here we have to make some comments on the calculations of the earnings forgone of the students. More than 90% of the students who participated in the research reported that their parents support them fully financially. More than 85% also stated that they would not be in employment, even if they were not doing this A-level. A point to note here is that (as the analysis of the data showed) the people within the Greek community of London who are most likely to do the Modern Greek A-level are mainly in the middle class group. Therefore they can not be considered as a representative sample of the Greek population in London.

The earnings forgone were calculated as a means of finding the

opportunity cost that the attendance of this provision brings to these students. The idea which underlies these calculations is that these students give up a lot of their leisure time anyway. And this leisure time can and should be costed for the individual students. In the open-ended questions a large majority of students commented negatively on the issue of the time they spend on this course. They clearly stated that they do not like the fact that they have to spend hours from their week evenings or on Saturdays for Greek school. Moreover, as I explained in chapter five the individual cost refers to the family as a unit which bears the expenses and mostly the fees.

The governments of Greece and Cyprus are interested in making the most of the money they spend. However, they do not always have all the necessary information to test for this: It is only recently that they began gathering information on the A-level exam results. Also, government officials do not always have the authority to analyse the use of the resources as these schools are run by groups of individuals.

This study was able to test and rank the G.S.S. according to their cost-effectiveness. It used individual data, and then used multi-level analysis to test for the institutional cost-effectiveness in a hierarchical framework. This gives more reliable results compared to any results the analysis of variance might have given. The ML3 package gives even more reliable results when the numbers are larger. This specific research could not have large numbers as the real population itself is not large. That is why initial three-level variance component analyses were performed at first in an attempt to test for the applicability of the package on the data. Also the results of ML3 were compared to the results of the regression in SPSS package for comparison.

Whether the findings of this study offer any guidance to ways and means of improving this provision, we shall discuss in the last section more extensively. It is there that we shall also refer to the usefulness and the importance of this study and make some concluding remarks.

10.5. Concluding Comments

This piece of research is mainly based on an education production function framework. That is the reason it firstly defined and elaborated on the term of educational productivity and the closely related concepts of efficiency and effectiveness. This study investigated the field where these issues are mainly found- that of educational production functions (E.P.F.). The area of E.P.F. was the basis for the input-output analysis which then developed into school effectiveness research. This work focused on the cost-effectiveness of an educational programme. It set the theoretical framework of the specific research, empirical work and analysis. It also defined and designed the tools it would use.

This study was an important piece of educational research because :

- i. It used a comprehensive model to assess the effectiveness of the G.S.S.. The model used is described in the methodology chapter. The study collected different type of data, which concerned the two main outcomes of this provision. It also used different methods of collecting these data and, then, compared the results. It referred to the influence of input and process factors on these two outcomes, examined the different perspectives of these factors and tested the influence of the people which are involved with these.

Scheerens (1992) commented that such a comprehensive model should exist in school effectiveness studies :

‘ Questions about the perspective of actors concerned with effectiveness issues, the slope and temporal context of these issues and the dominant methods in assessing achievement serve to make the underlying conception of the dominant model employed in school effectiveness research more explicit. It is concluded that this model can be described as a multi-level, process product model of learning. Achievement, propelled by the quest for knowledge of school reformers and national policy-makers, in which as much use as possible is made of objective data, a short term perspective is discernible and assessment standards are largely comparative.’

Scheerens, 1992, p 12

ii. It tested the effectiveness not only on academic grounds. It examined the priorities the different actors that are involved in these schools have in promoting effectiveness on cultural grounds. This issue of priorities in potential roles of the schools is important and is usually not included in empirical work. As Scheerens (1992, p 11), again, points out:

‘ ...the question of what priority a school gives to increasing effectiveness or productivity amid other competing value positions has seldom gone into empirical studies’

iii. This study combined qualitative and quantitative methods of collecting and analysing data. As Professor H. Goldstein said in a seminar on school effectiveness (1995), ‘purely quantitative work in school effectiveness and school improvement movement, loses the social and cultural issues. Since, however, this (effective schools work) is a comparative exercise it definitely needs quantitative work too’.

iv. It used ML3 package as well as the SPSS regression

package for more reliable results in the regression model. This parallel use of the two packages helped with some technical problems which are linked to relating data measured at different levels to one another. The justifications for the use of ML3 package were given in the chapters on methodology and analysis.

vi. It looked at the results of two successive year cohorts for comparison. It tested for differences in these two years and found out that they were not significant. In this way it indicated that the use a longitudinal model was not required.

The main aim of this study was to use the A-level in Modern Greek results and the results of this research in general to discover differences if exist, inform policy and improve practice. It found differences in the effectiveness of the G.S.S. and then went on to find out why these differences exist. It found links between the factors which were identified as important in the effectiveness of the G.S.S. and those established to contribute to school effectiveness in previous research (see the chapters on the review of the literature and methodology). Below, I present the most significant of these factors (note: within the limitations that this study had set) which might be of interest to policy makers.

TABLE 10.3.: Results of the analysis of individual data

The most significant results of the first level of analysis

Variable	Result (the most significant factors in effectiveness)
1. Student	Females with educated mothers.
2. Teacher	More qualifications which are relevant to this subject, age over 45, experience between 5-10 years in this subject, females.
3. Organisation	The effective involvement of the coordinating body. More teachers and more teaching time. A class of 5-10 students. A head teacher over 45, with an MA, male, involved in the appointment of teachers, set clear goals and pursue them.
4. School climate	The teacher-pupil relations, the pupil-pupil relations, the student satisfaction from the subject, their school and their work.

The policy makers at all levels in this field of educational provision might also be interested to know that cost itself was not found to be a factor affecting effectiveness. Its effect is through the provider/type of school. It seems that the most effective schools make better use of their resources and they are cheaper. They own their buildings and they pay teachers less. This 'good use', however, appears to be marginal and under question when we come to teacher salaries. There were many complaints made from the affected teachers and there is a feeling that 'they should not 'take any more'.

Also, the finding that the two outcomes of this educational process were found to be 'joint products' is of great importance too. Most of the actors in this provision expressed their fears regarding the

'exaggeration' in the 'offering of Greek culture' which might either take too much of students' time (see the analysis of the interviews in chapter seven) and/or create negative attitudes to them against Greek school. There should therefore be a balance in both academic and cultural 'provision'. Of course, we must always keep in mind that these two, as joint outputs, complement one another in most cases. By pursuing one goal we also pursue the other.

Greek schools were found to have an important role not in creating Greek identity in the first place (since the families had already created it), but in sustaining and strengthening it. (A piece of information which is related to this fact is that 99% of both of the students parents come either from Greece or Cyprus). An important educational issue is what the school could be in this matter without what is outside. Educational decision makers should, therefore, identify what is utilised inside the school, that is the cultural 'capital' of the pupils, and then work with it. Education has been widely used to form cultures. If the case is such as this study found out, then traditional school practices, which were considered to 'create culture and identity' might be reconsidered. The effect of such methods can not be separated from the cultural 'capital' the students bring 'inside school from what is outside'.

As elaborated before, a prominent figure in this field, G. Kress (1993, p. 97), points out:

' Education in its institutionalised form, is one of the crucial sites of cultural production and reproduction in western societies.'

When he speaks of the English language as a school subject he asks the question 'What is English, the school subject, now? What will it

continue to be...?'. Part of the answer he gives to this question is quoted below. In this quote one can recognise most of the points discussed above regarding the Modern Greek language :

'i) English is a carrier of definitions of culture; ii) English is a carrier of definitions of its society; ...v) English is the site of the development of the individual in a moral, ethical, public social sense.'

(G.Kress, 1994, p. 101)

This study has clearly found that schools and especially the types of providers of the schools do make a difference in providing Modern Greek A-level courses. The providers do also make a difference in 'offering Greek culture' and in helping their students 'maintain their Greek identity'. These results confirm the value of including assessments of more than one educational outcome in a study of school effects. The study of only one, the academic outcome, could provide a misleading picture of the general effectiveness of particular schools.

A finding of this empirical piece of work, which is important to teachers, pupils and parents, is that the school or type of school makes a larger contribution to the explanation of progress than is made by pupils' background characteristics, sex and age (as found in 'School Matters',1989). The effect of the SES characteristics is limited when the measure of the students' intake, that is the GCSE grade, is taken into consideration. However, this effect, although small, is still there.

The school related factors to effectiveness which were listed above are also important to teachers, pupils and parents in the field of the G.S.S.. They should, however, be of major importance to policy makers and decision makers in this field too. If these groups of people wish to make informed decisions, which might lead to school improvement, they should take these results into consideration. Of course, findings like

these are context specific to these schools. However they do contribute to our knowledge of the economics of school effectiveness. Findings of the rest of school effectiveness research can not be considered completely generalisable either. As Louise Stoll and Peter Mortimore (1995, p. 2) point out:

‘It has become increasingly clear that what ‘works’ in one context may lack relevance in others...This has implications for the generalisability of research findings.’

Decisions makers in this specific field, must, therefore, set the basis for the establishment and development of a better and continuous monitoring system of this type of educational provision. Such a system will provide corrective feedback and facilitate self-examination. It can induce debate about school policy and practice. Such a system will offer everybody, and especially the decision makers, all the the information we need on the functioning of these schools and contribute to our understanding of how the G.S.S. work.

Such an understanding will contribute to the improvement of this type of schooling. Further work is, however, needed to identify strategies which can speed up the improvement process. Such work should be undertaken by the upper levels of decision making: the Greek and Cypriot governments and EFEPE. Then, it must be related to school improvement movement work in general. Then it can offer a lot to the improvement of this provision on the one hand and to the school improvement movement on the other.

This study has thrown some light on many aspects of this type of educational provision. There is no doubt that more is needed in this field. A number of the future needs have been identified in the process of carrying out this research. Everyone who might be interested in the

effectiveness of the G.S.S. and, therefore, their improvement must investigate whether the schools and classrooms as they are now can provide these young people with experiences, knowledge and skills necessary for success and quality well-being in the multicultural British society, or in the society of the Europe of the 21st century.

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APPENDICES

APPENDIX 4.1. Outputs in the Pennsylvania Educational Quality Assessment model

Output	Brief description
1	Self concept
2	Understanding others
3	Verbal basic skills
4	Interest in school
5	Citizenship
6	Health habits
7	Creativity potential
8	Creativity output
9	Vocational development
1 1	Appreciation of human accomplishments
1 2	Preparation for change

Source: Cohn and Millman (1975) .

APPENDIX 4.2. *Manipulable inputs in the Pennsylvania model*

Input	Brief description
1	Average extra curricular expenditure per secondary school pupil
2	Administrative man hours per secondary school pupil
3	Auxiliary man hours pupil
4	Library books available for checkout per pupil
5	Crowding: ratio of actual enrolment to state rated capacity
6	Teacher classroom practices
7	Average class size
8	Curriculum units available for student registration per grade

9	Counsellors per secondary school pupil
10	School usage of innovations
11	Accessibility of library
12	Preparation coefficient (teacher specialisation)
13	Paraprofessional support
14	Students per academic faculty
15	Teacher's education
16	Teacher's teaching experience
17	Teacher load (instructional hours per week)
18	Average teacher's salary

Source: Cohn and Millman (1975)

APPENDIX 4.3.: The nine organisational/structural variables identified by Purkey and Smith (1983).

1. Emphasis is based on school site management, with considerable autonomy given the school leadership and staff.
2. Strong instructional leadership is provided by the school principal, other administrators, or teachers (although they observed that the principal is uniquely positioned to fill this role and his or her support is essential).
3. Stability and continuity are valued, and actions that decrease staff stability are avoided, thus facilitating agreement and cohesion.
4. Curriculum articulation and organisation are used to achieve agreement on goals, to develop a purposeful program of instruction coordinated across grade levels, and to provide sufficient time for instruction.
5. There is a Schoolwide staff development program, based on the expressed needs of teachers, involving the entire school staff and closely related to the school's instructional program.
6. Parents are informed about, and supportive of, school goals and students responsibilities, especially with regard to homework.
7. Schoolwide recognition of academic success is provided, thereby encouraging students to adopt similar norms and values.
8. Time is used effectively with more time devoted to academic subjects and less time lost due to disruptions or nonacademic activities.
9. Support from the school district is evident (because, while change must occur at the building level, it is not likely to happen without support and encouragement from the

central office).

APPENDIX 4.4. : The four process variables identified by Purkey and Smith (1983)

1. Collaborative planning and collegian relationships are evident and help break down barriers, develop consensus, and promote a sense of unity.
2. There is a strong sense of community. (A feeling that one is a member of a recognisable and supportive community reduces alienation and increases commitment to school's goals.)
3. Clear goals and high expectations, including clearly defined purposes and agreement on priorities are evident.
4. Order and discipline are based on clear rules enforced fairly and consistently. (This practice helps communicate a sense of seriousness and purpose with which the school approaches its task.).

APPENDIX 4.5.: The factors that Hacomb (1991) identified for the school process.

- exploring the research and process
- securing district commitment and resources
- forming improvement teams and developing team skills
- affirming the system and belief system
- gathering and analysing data on school characteristics and student outcomes
- developing school and student status reports
- identified data-based, mission-oriented improvement objectives
- selecting strategies and developing a plan for implementation and monitoring
- examining effective curriculum and instructional strategies related to improvement objectives
- implementing plan and monitoring results
- refining and renewing improvement efforts

APPENDIX 4.6.: Conclusions of the Rutter report.

1. Secondary schools in inner London did differ markedly in the behaviour and attainments shown by their pupils, as evidenced by behaviour whilst at school, proportion staying on at school beyond the age of 15, success in public examinations, and delinquency rates.
2. These differences could not be explained by differences in the intake.
3. The variations between schools were reasonably stable over periods of four or five years.

4. Generally schools performed fairly similarly on all the various measures of outcome.
5. The differences were systematically related to characteristics of the schools as social institutions (factors included degree of academic emphasis, teachers actions in lessons, system of incentives/rewards, good conditions for pupils, and children taking responsibility).
6. Outcomes were also influenced by external factors outside the teachers' control, including academic balance in the intakes.

APPENDIX 4.7.: Measures that Mortimore et al. (1988) used.

- Measures of pupil intakes to schools and classes: by age, race, language; attainments in reading, mathematics, visit partial skills: behaviour (teacher's rating).
- Outcomes; cognitive: tests of reading, mathematics, creative writing (annually) (all children); and oral skills (a sample). At fourth year: LEAs pre-secondary transfer tests of reading and verbal reasoning. Non-cognitive: Behaviour: teacher's assessment, twice each year. Also self-report of pupils' attitudes to different school activities, curriculum areas, and other aspects of school (annually). At third year: measures of each child's perception of how they were seen by teacher and by peer group, and their views of themselves. Full attendance data each term.
- Measures of classroom and school environment: variety of data: school organisation and policies, from interviews with heads and deputies. Class organisation and policies: teachers questioned about qualifications, responsibilities, philosophy of education and involvement in decision making.
Teacher strategies, from systematic classroom observations.
Views of parents, from interviews, are their views of child's progress and their involvement.
School life, from pupil and teacher questionnaires, plus observations.

APPENDIX 4.8. : Perspectives of costs and effectiveness (Thomas, 1990)

Effectiveness

I-O	Organisation	Institution	
Costs			
Subjective	1	2	3
Commodities	4	5	6

Utility	7	8	9
Opportunity	10	11	12

APPENDIX 4.9.: Research questions set by H. Thomas (1990):

1. Do degree qualifications influence the C-E of teachers?
2. How does the type of initial training influence C-E?
3. Do the salary scales of teachers influence their C-E?
4. Does the type of responsibility held by the teachers influence their C-E?
5. What effect does the length of teaching experience have on C-E?
6. What effect does the age of the teacher have on C-E?
7. Is there any difference between the C-E of male and female teachers?

8. Are some subjects more cost-effective than others with respect to A-level work?
9. Is the commitment of time tabled resources to subjects an influence on C-E?
10. Is the number of teachers time tabled with a group a factor in its effectiveness?
11. Is the number of candidates entered from a group an influence on effectiveness?
12. Are some institutions more cost effective than others with respect to A-level work?

13. How does the C-E of A-level provision differ from the perspective of the student, the institution or LEA, and society.
14. How reliable are the measurements of C-E to changed assumptions about the measurements of cost and performance.
15. Is cost-effectiveness analysis the most appropriate way of examining this particular issue of public policy?
16. Is it possible to generalise any findings about the methodology of this study to other applications of cost-effectiveness analysis?
17. How can information within educational systems be organised to provide better evidence on costs and quality?
18. Does any part of the study offer guidance on ways and means of improving the provision of these courses?
19. Aside from judgments about cost-effectiveness, what can we learn from patterns of costs processes and outcomes?
20. What are the implications of cost-effectiveness analysis of a view of costs as subjective and tied to individual valuations?

Yes.....

No.....

If yes, please state why

.....

Question 4. In which country were you born?

Question 5. How many years have you lived in England?

1-5 6-10 10-15 over 15

.....

Question 6. a. Which is your nationality?

Greek Cypriot... Native British.....

Greek..... Other.....

Question 7. Which religion do you belong to?

.....

Question 8. In which country was your mother born?.....

In which country was your father born?.....

Question 9. At present, is your father at work? (either full time or part time)

Yes.....

No.....

If yes, please say in what kind of job

Please state the level of education your father recieved (primary, secondary, higher).

.....

Question 10. Is your mother at work? (either full time or part time)

Yes.....

No.....

If yes, please say in what kind of job

Please state the level of education your mother recieved (primary, secondary, higher).
.....

Question 11. What kind of accomodation do you live in?

Privately owned..... Council rented....
Privately rented..... Don't know.....
Other(please state)....

Question 12. Have you got any brothers? Yes..... No.....

If yes, how many?.....

Question 13_Have you got any sisters? Yes..... No.....

If yes, how many?.....

Question 14. a. Have your parents or guardians come to your Greek school during the last year?

Yes..... No..... (If you tick this box go straight to question 15)

b. If yes, how many times?.....

c. Have your parents or guardians visited your school (you may tick more than one answer)

to attend a celebration?
to ask about your progress?.....
to attend a parents evening?.....
Other (Please say what).....

Question 15. Are you studying any other subject at A-level?

Yes..... No.....

Question 16. If yes, what subjects are you doing and where?

.....
Question 17. If you are studying for other A-levels, when are you hoping to take the exams?

.....
Question 18. When are you hoping to sit for your A-level in Modern Greek?

.....
Question 19. What do you intend to do with your A-level in Modern Greek?

- a. Enter higher education.....
- b. Get a job.....
- c. Other [Please specify].....

.....
Question 20. What type of higher education would you like to enter?

.....
Question 21 . What type of job would you like to enter?

.....
Question 22. a. Do you have a job?

Yes.....

No.....

If yes , what is this job? [please state if it is full-time or part-time and the amount of your earnings]

b. Do you believe that if you were not doing your A level in Modern Greek you would have been in employment?

Yes.....

No.....

If yes, please state the employment and the earnings you could have earned.

Question 23. Do your parents support you financially

- a. fully?.....
- b. partly?.....
- c. not at all?.....

Question 24. Would you have done an A-level in Modern Greek if it were done elsewhere?

Yes.....

No.....

Question 25 . Which Greek Supplementary School do you consider effective?

- a. One with high examination results.....
- b. One with large numbers of students.....
- c. One with both.....
- d. Other [please define].....

Question 26 _ What other activities/ lessons do you attend at Greek School?

Question 27. How many hours per week do you spend on doing your homework in Modern Greek?

Question 28. Do you do your homework in Modern Greek

- a. always ?.....
- b. regularly ?.....
- c. sometimes?.....
- d. never?.....

Question 29. What are the reasons for doing your homework in Modern Greek?

- a. because it is set by the teacher.....
- b. because it is interesting.....
- c. for both reasons.....
- d. for other reasons [please specify].....

Question 30. Do you attend your school

- a. always?.....
- b. regularly?.....
- c. often?.....
- d. sometimes?.....
- e. rarely?.....

Question 31. Please circle the coding you agree with (the statements refer specifically to our Greek School unless otherwise specified) :

	SA	A	N	D	SD
(a) The work load is about right	1	2	3	4	5
(b) The work I was asked to do is interesting	1	2	3	4	5
(c) The work I is asked to do is relevant to my needs	1	2	3	4	5
(d) The materials for the lesson are clear	1	2	3	4	5

(e) The materials for the lesson were issued in good time	1	2	3	4	5
(f)- I know how to make contact with my teacher and the head	1	2	3	4	5
- The office handles the problems sympathetically and effectively	1	2	3	4	5
(g) The teacher is informed	1	2	3	4	5
(h) The teacher is stimulating	1	2	3	4	5
(i) Individual help and support is available when necessary	1	2	3	4	5
(j) The teacher manages the group skillfully	1	2	3	4	5
(k) All the students have an equal opportunity to participate	1	2	3	4	5
(l)- I find it hard to get down to work on this subject	1	2	3	4	5
- I look forward to lessons in this subject	1	2	3	4	5
- I like exams and tests in this subject	1	2	3	4	5
- I regret taking this subject	1	2	3	4	5
- I prefer this subject to any of my other A level subjects	1	2	3	4	5
(m) I have a Greek origin	1	2	3	4	5

(n)- I come to this school because I am Greek	1	2	3	4	5
- I would advice all my Greek friends to take this A-level	1	2	3	4	5
- I come to Greek school to meet my Greek friends	1	2	3	4	5
- I know more about my origin now	1	2	3	4	5
- The knowledge and school experience will help me maintain a stronger identity	1	2	3	4	5
(o)- Dicipline is satisfactory	1	2	3	4	5
- We all want decipline	1	2	3	4	5
- The principal have to interfere with decipline	1	2	3	4	5
(p) - I enjoy coming to Greek school	1	2	3	4	5
- I regret coming to Greek school	1	2	3	4	5
- I think of my Greek school even during my free time	1	2	3	4	5
-There is more Greek culture in the A-level provision	1	2	3	4	5
- More culture is important for us	1	2	3	4	5
(q) There is strong academic climate in this school	1	2	3	4	5
(r) There is a strong Greek climate in this school	1	2	3	4	5

Please add any comments on any of the above questions here

Question 32. Please write down what you like and what you do not like in your Greek school.

Question 33. Please describe how you would like about your school to be.

Question 34. Please describe the type of teacher that you believe is a good teacher.

APPENDIX 5.2.: Questions to the teachers

1. SEX
2. AGE (age groups)
3. School/schools appointed as an A-level Modern Greek teacher.
4. How would you describe your religious affiliation?

5. How would you describe your ethnicity?
6. How many years have you been a teacher?
7. How many years have you been teaching A-level Modern Greek?
8. What first degree have you got?
9. What other degree have you got?
10. Do you believe that this A- level should be taught in the Greek Supplementary Schools? Could you please explain why?
11. Do you believe that the numbers of students that attend this A- level in the G.S.S. should rise? Why?
12. Do you believe that successful examination results should be the only aim of these schools?
If yes, please give reasons.
If no, what other aim should these schools be pursuing?
13. Please describe the teaching material you use expressing your views about it.
14. Please comment on the quality of the students you had in your class. If you believe it is necessary, make special reference to the GCSE mark as their entry qualification as well as their age of entrance in this class.
15. Which management policies in your school do you believe that affect the A-level provision positively or negatively.
16. Can you refer to any other factors (parents, students, school bodies, principals, colleagues) that affect this provision positively or negatively?
17. Could you suggest any improvements in the teaching of this A level in these schools?
18. Would you please comment on the type of homework you usually give your students and your expectations regarding this homework.
19. How were you appointed in the position you hold today?
20. Which is your funding body? Do you believe that if you were a public servant you would be more or less efficient?
21. Please read each statement carefully and tick the box which best presents the way in which you run the classroom. A questionnaire was prepared for them)

[There is going to be a five points scale: always, often, sometimes, rarely, never.]

- Students take part in the lesson actively
- students get homework
- marks are given for homework

- I use my own materials
- I use material designed with colleagues
- I use material I buy from the market
- all students have equal opportunity to participate
- I support them individually
- I try to stimulate them
- the office handled the problems sympathetically and effectively
- I was free to work the way I wanted in my class
- I was told what to teach

22. Please tick the box that represent your feelings for the following statements
[a scale from strongly agree to strongly disagree]

- The main aim of this provision is to help students maintain their national identity.
- The main aim of this provision is to help students get good results
- Most students work and try hard in class
- Students often misbehave
- Students attend voluntarily
- The management of the G.S.S. regarding this provision is efficient

APPENDIX 5.3.: ENABLING QUESTIONS (prepared for the conversations)

- Greet the students and introduce myself. Talk about my research and ask for their cooperation. Ask them about the language they want to use.

- Opening questions:

* How do you feel now that the exams are drawing near?

* Have you participated in the petition for the non abolition of A-level Modern Greek from the UCAS syllabus?

- Have you enjoyed your subject of Modern Greek A-level?

- Have you enjoyed coming to Greek School?

- What is your parents' attitude towards you coming to your Modern Greek A-level classes?

- Why do you think they want you to be here-if so?

- What is your view regarding the Greek culture you obtain in this school generally and especially in the A-level provision?

- Would you say of yourself 'I am Greek'? How do you feel about it?

- Have you got Greek friends? Do you prefer them to your other friends, if so? Do you speak Greek with them?

-What customs/traditions of Greek origin do you have? Do you want to have them?
Regarding:

food

church
 holidays
 Greek community events
 religion
 wedding/marriage

- What are your plans for the future? How are you going to use your A-level in Modern Greek certificate? (Return to Greece or Cyprus, enter Higher education, work in a bilingual job, improve status in family and community)

Appendix 8.3.1

Multiple regression

Multiple R .52932
 R Square .28018
 Adjusted R Square .27295
 Standard error 2.51012

Analysis of variance

	DF	Sum of squares	Mean square
Regression	2	488.04053	244.02027
Residual	199	253.84066	6.30071
F=	38.72903		Signif F= .0000

-----Variables in the equation-----

Variable	B	SE B	T	Sig T
GCSEG	6.739723	3.806941	1.770	.0782
GCSEG2	-.374291	.312482	-1.198	
.2324				
(constant)	-22.092272	11.463987	-1.927	.0554

Appendix 8.3.2

Multiple regression

Multiple R .54684
 R Square .29905
 Adjusted R Square .28832
 Standard error 2.49390

Analysis of variance

	DF	Sum of squares	Mean square
Regression	3	520.08893	173.36398
Residual	196	1219.03107	6.21955

F= 27.87389 Signif. F= .0000

-----Variables in the equation-----				
Variable	B	SEB	T	Sig T
GCSEG	1.936895	.270665	7.156	.0000
SEXB	-.675809	.369441	-1.829	.0689
MED	.612776	.288507	2.124	.0349
(constant)	-7.932690	1.658976	-4.782	.0000

Appendix 8.3.3

Multiple regression

Multiple R .58943
 R Square .34743
 Adjusted R Square .30883
 Standard error 2.44711

Analysis of variance

	DF	Sum of squares	Mean square
Regression	11	592.99976	53.90907
Residual	186	1113.82853	5.98933

F= 9.00236 Signif. F= .0000

-----Variables in the equation-----				
Variable	B	SEB	T	Sig T
GCSEG	1.909141	.268514	7.110	.0000
SCH2	-.796662	.565535	-1.409	.1605
SCH3	-.618612	.703984	-.879	.3806
SCH4	-1.576941	.699395	-2.255	.0253
SCH5	.168889	.538895	.313	.7543
SCH6	-1.591794	.828600	-1.921	.0562
SCH7	.109702	.678150	.162	.8717
SCH8	-1.360253	.779562	-1.745	.0826
SCH9	-.561774	.627434	-.895	.3717

(constant)	-7.399224	1.716890	-4.310	.0000
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Appendix 8.3.4.

Multiple regression

Multiple R	.71958
R Square	.51779
Adjusted R Square	.49683
Standard error	2.10456

Analysis of variance

	DF	Sum of squares	Mean square
Regression	8	875.10499	109.38812
Residual	184	814.96755	4.42917

F= 24.69720 Signif. F= .0000

-----Variables in the equation-----				
Variable	B	SE B	T	Sig T
GCSEG	.839226	.271552	3.090	.0023
SEXB	-.280383	.324806	-.863	.3891
MED	.083230	.262980	.316	.7520
COST	-5.10431E-04	3.8918E-04		-1.3112
.1913				
EXPMARK	.911976	.117228	7.780	.0000
PRVD2	-1.096379	.586053	-1.871	.0630
PRVD3	-1.417188	.531304	-2.667	.0083
SCH9	-1.902786	.547969	-3.472	.0006
(Constant)	-3.805105	.1640683	-2.319	.0215

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