



MAURITIUS RESEARCH COUNCIL
INNOVATION FOR TECHNOLOGY

MAPPING EDUCATIONAL ACHIEVEMENT IN MAURITIUS

Final Report

Submitted on 3rd September 2007

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This report is based on work supported by the Mauritius Research Council under award number MRC/RUN-0203. Any opinions, findings, recommendations and conclusions expressed herein are the author's and do not necessarily reflect those of the Council.

Report on Mapping **Educational Achievement** **in Mauritius**

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Executive summary

Education in Mauritius is standing at the crossroads of its history. It is construed as a catalyst of change at both the economic and social levels, a means of empowering the Mauritian people to face the challenges of globalization. For years successive governments have invested massively in the sector, more out of conviction and popular support than out of a realistic assessment of the visible gains on educational returns. While the “process” view of education is well established, it remains pertinent to consider the “product” aspect, especially when an assessment of benefits in quantitative terms is sought. In an era dominated by economic concerns, it is most desirable for any country to engage in a systematic and comprehensive analysis of the output of the educational machinery.

One of the purposes of this study was to focus on one outcome of the educational system in Mauritius, which is, educational achievement at the primary and secondary level. Educational achievement here, is inclusive of the notion of educational performance and educational attainment. Examinations results at the level of the Certificate of Primary education, School Certificate and Higher School Certificate have been analysed over the period 1990-2004 for CPE and 1998-2004 for SC and HSC, trends identified, pointers developed and analysed, issues and concerns raised.

However, the study did not limit itself at analysis of quantitative data. In its second phase, a questionnaire was devised to gain understanding of the process factors which may influence educational achievement. Three interrelated settings were identified: the family, the peers and the neighbourhood or community. The administration of the questionnaire was followed by the selection of 13 case studies of individuals with varying educational and life achievement to develop deeper insight into the micro processes at play in determining the relationship between educational and life achievement. 4 individual interviews with participants who provided socio-historical insights at the community and national levels were also carried out.

The findings are as follows:

- There have been generally very negligible or statistically insignificant fluctuations in achievement in an upward direction although sporadic improvements have been registered in certain subjects areas at some levels. The remarkable stability and predictability of trends at CPE is disquieting insofar as it appears that stakeholders have devised strategies to beat the system by focusing on specific aspects of the question paper. It becomes doubtful whether examinations really succeed in measuring what they are purported to.
- Despite increasing investment in education at both primary and secondary levels, there has not been a significant change in the achievement outcomes of education. The contribution of the schools, teachers, the Ministry of Education MES, NCCRD, MIE and other stakeholders is obscure and little has been done over the past 15 years to bring about a significant positive change in the system.
- There exist marked performance differentials at the level of subjects, gender and schools. The fact that around 40% of students coming out of primary schooling have not mastered the ELC in English and Mathematics is a sure cause of concern. The data seems to militate against the view that schools make a significant difference in the educational achievement of its pupils. Even with the screening and selection process that takes place as students proceed up the educational ladder, dismal patterns are telescoped from CPE, SC and HSC.

- The indicators used signal that boys' attainment is lagging behind girls attainment at all levels even when the statistics are balanced for initial entry gap. Girls, are not only maintaining their lead in 'traditional' subjects like language, they are also quickly closing the gender gap in subjects where boys traditionally use to dominate. These trends should however not obscure the fact that boys in high performing schools still achieve very consistently and that the gender variable become more acutely visible when coupled with variable of school type on low performing private schools in suburban areas.
 - School type was the third parameter which registered differential achievement. On a first round of region wise of CPE trends across Urban, Rural, Coastal, Suburban demarcation, the "school type" effect appears prominently - urban schools, because of the 5 star schools, lead the way followed by rural, sub-urban and coastal schools. Achievement differentials are widest in English and Maths and lowest in French and EVS. At the secondary level, the Confessional, State and Private schools categories showed clearly the lead of State schools in almost all subjects in the high category bracket although for confessional .schools, the distribution is less skewed.
 - The questionnaire revealed that the educational achievement trends of the sample for the period under study match the findings of the population data obtained in the first part. Low achievement in English is carried over till the end of schooling whereas achievement in Mathematics is reversible. The inadequacies of the social environment appear to be a serious hindrance to language learning and may explain the irreversibility of trends in English.
- In conformity with the existing literature which posits that the role of the family is central to explaining achievement, the data from both Survey and Case studies reveal that the variables of parents' education do impact on both attainment and achievement, although in an interactive mode, within a complex social matrix consisting of the peers, neighbourhoods and communities.
- It appears that often parental involvement is perfunctory and reactive rather than pro-active and informed. Parental involvement is construed as a key factor impacting on education in the current research landscape and has not been given enough attention in the Mauritian context. Mothers are more involved than fathers in the education of their children on a number of parameters
 - The case studies established that high educational and life achievers have had parents who have taught them at an early age the skills and values which have effectively prepared them to face demands of school or work. Their parents encouraged autonomy and initiative and fostered a strong sense of self and high efficacy.
 - Participants, whose parents demonstrated high level of "demandingness" together with support, have achieved more. A strong and strict discipline set with clearly defined parameters in early years strongly influence children's perception of themselves and their later attitude towards efforts and delay of gratification.
 - The life stories of some participants whose parents were not highly educated indicate that low educational achievement of parents was not necessarily a barrier to achievement of their children. The home lifestyle defined in terms of discipline and belief in hardwork and the worth given to education could also make up for formal educational achievement.
 - Families have themselves been heavily influenced by the overarching principles and values set by their neighbourhoods and communities. The social worth of education has been highlighted in some neighbourhoods and communities while they have been discounted in others. The neighbourhood and community effects could offer a partial explanation to the patterns of achievement of schools in sub-urban and coastal regions as compared to urban and

rural regions. Family capital appeared to have been a derivative of social capital and both strongly impinge upon life trajectory.

- Some individuals succeed against all the odds and despite their families and neighbourhoods. The intrinsic drives related to own personality as well as the availability of positive role models within the micro and meso systems also enhance the chances of success.

Recommendations

- (i) Quality Assurance procedures which are both output and process-oriented must be applied at all levels of the educational sector.
- (ii) Concrete and realistic benchmarks and achievements targets must be set every year and the responsibility equally shared by the school and parents. A system must be set up to hold all stakeholders accountable for educational outcomes.
- (iii) The system of automatic promotion must be revisited and even discarded altogether in primary because it compounds the problem of failure. Regular monitoring of achievement is a must to avoid wastage.
- (iv) Mauritius must participate on a more regular basis in international surveys regarding achievement in key skills at primary level in Maths, Languages and Science to ensure the quality of educational outcomes.
- (v) The teaching of Mathematics ,English and Science must be revitalized at all levels. Special attention must be given to English as it is the medium of instruction for all other subjects and low achievement in English prevent our children from achieving their full potential in other subjects.
- (vi) A new boost must be given to parental involvement in their children's education either via the formal channels of the school or via socio-cultural and socio religious organizations. There is a need to strengthen the community to support parents in the education of the children.
- (vii) Continuous professional development for teachers must be envisaged for all teachers at all levels. Emphasis must be given to training in remedial education. Professional development opportunities must be accompanied by post-training performance benchmarking.

Acknowledgements

Yogesh. C. Tengar is Senior Lecturer and the (Ag) Head of Department of Curriculum Studies & Evaluation at the Mauritius Institute of Education and is currently reading for a Ph.D at the Tata Institute Social Sciences. His contribution as Investigator-Collaborator to this piece of research on Educational Achievement has been cardinal at the stage of the very conception of the project up till the processing of gross data of Phase I and the field work for Phase II. His critical reading and analyses of the interim reports have sparked deeper insights at the level of the treatment of data and discussions and have enabled a peer review and validation of the report.

Acknowledgements

Rajendr Ramnauth for processing of Data of Phase I and Phase II, Stage I and for his incisive comments regarding data analysis.

A special word of thanks to the following persons:

- **Mrs S. Thancanamootoo**, Acting Director, MIE
- **Mr P. Parmessur**, ex Director, MIE
- **Mr O. Varma**, Head, Education Studies Department, MIE
- **Mrs Kamla Ernest**, Senior Graphic Designer, MIE

for continued support and interest



Report on Mapping Educational Achievement in Mauritius

Chapter 1

1.1 Introduction

Education is considered as one of the major activities of any society. Through the process of both formal and informal education, society not only transmits to future generation, the best of its knowledge, skills and values, but also ensures its survival. In the context of globalisation and the rise of knowledge economies, the compulsion to transmit generic as well as specific skills to the younger generation becomes more pressing in view of the level of competition which characterizes the labour market in particular. Assessing the level of educational achievement becomes, in this light, a legitimate feature of any system. Furthermore, given the enhanced need to measure the return on investment in education, educational output must be quantitatively and qualitatively gauged to allow comparison over time and among categories of students.

There is yet another aim of education which makes it crucially relevant to measure achievement. Education is often considered as an instrument of social change. It is construed by policy makers worldwide that, by improving access to quality educational opportunities and enhancing the achievement of the lower classes, educational and social mobility will be enhanced bringing about greater social justice. One sure way of assessing the success of the social dimension of education is to evaluate both the educational and life achievement of the targeted groups.

However, while the centrality of educational achievement as a pre-requisite for assessing the effectiveness of a country's investment in education is well established, what are less clear-cut are the instruments to be used as indicators of educational achievement. While it is possible to consider educational achievement as the skills learnt (cognitive or otherwise) or the knowledge developed in the course of schooling, there could also be an alternative interpretation that seeks to highlight the ability of the person to transform school learning into life-skills which will then enhance his ability to achieve in life. Of course, given the "multidimensionality" of educational benefits assessing outcomes become problematic statistically.

The most common measure of achievement used by researchers is scores of students on examinations or tests. In cases of inter countries comparison, as those devised by the Trends in Mathematics and Science study (TIMSS Report 2003), and Progress in International Reading and Literacy (PIRLS Report, 2003) for the International Association for the Evaluation of Educational Achievement, a specific achievement test is devised. While an increasing number of countries have

devised their own mechanism for assessing the outcomes of their educational system to regularly obtain feedback on educational achievement various levels or grades attained within normal schooling, the only data available in Mauritius are either end-of-year or term-wise results of pupils or the end-of-cycle examinations. Since 1996, the Mauritius Examinations Syndicate produces annual reports on achievement displaying trends in various disciplines across the gender and school type variables.

However, if Educational Achievement (E.A) is to be increasingly relevant to socio-economic policy-making in a globalised context, this gap in the local research literature has to be quickly filled. At a time when social activism is pressing for further democratisation in terms of enhanced access and equity, Educational Achievement becomes crucially important to decisions of educational financing. The forbidding competitiveness of the new economic order, with high premiums on productivity and cost effectiveness, requires Educational Achievement to be urgently and deeply investigated to inform the strategy towards manpower planning for sustainable development. At the local level, with the Master Plan on Education (1991) to date, education reform has endured systematic procrastination because the reform proposals articulated in a top to bottom mode have missed the research proven mapping of the local culture of education and of its dysfunctions at the grass root and intermediate levels.

A report with the scope and depth of analysis proposed in this study has not been produced; Mauritius has never engaged itself in an international or even national inventory of educational achievement. While factors affecting achievement at the level of specific subject or level have received attention in a number of PGCE and B. Ed Dissertations and M. Phil Studies at the MIE and the University of Mauritius, there has not been an attempt till today to document both the trends at the level of all three examinations and gather information about the processes which could potentially support our understanding of those trends. Indeed, many of these studies provided snapshot views of a multidimensional phenomena and used almost exclusively either the quantitative or the qualitative approach.

Moreover, this study also represents a breakthrough in the Mauritian research arena insofar as it seeks to capture the related dimension of educational achievement which is life achievement. By analyzing the factors which impinge upon the ability of individuals to realise their potential and harness the possibilities provided to them, it is expected that educational and social policy can be better geared to achieve their twin targets of social justice and equity.

The present study will benefit all stakeholders in the following ways:

It will:

- provide a sound empirical database on which further research on educational achievement can be grounded
- enable the setting up of a benchmarking system where targets could be set for different areas and at different levels
- identify the priority areas where efforts have to be intensified
- enable policy makers to gauge the impact of policy on educational outcomes and can lead to adjustment towards key areas
- establish the needs in terms of family and community support to education
- help devise pointers for achievement in relation to other countries
- contribute to development of contextualized knowledge on the factors which affect pupils' and people's trajectory and, thus, help grassroot organizations to concentrate their efforts on key determinants

1.2 Presentation of the Project

Phase I, in a desk research mode, will analyse the CPE, SC and HSC results over the last 10 years (1990-2004) to provide a critical reading of Educational Achievement in a developmental perspective. This phase of the research will be guided by the following pointers:

- National aggregates (CPE, SC and HSC)
- Graded performances (high, average and low level performances)
- Differential school performances, regionally (in urban, suburban, rural and coastal divisions) and by denominations (state, private and confessional)
- Acquisition of basic skills in 2 core subjects, English language (linguistic skills) and Mathematics (logical thinking skills)
- Sociological criteria (gender as a pointer)

The Master Plan on education (1991) highlights the need for sound education policy to be grounded on “hard evidence” fetched by research rather than anecdotal evidence and intuition. This study “Mapping Educational Achievement In Mauritius” aims at developing an informed understanding of the aggregate national educational performance in a post-independence retrospection mode at the levels of the three main examinations in Mauritius namely the CPE, SC and HSC.

It will fetch a detailed breakdown of examinations results for a period of years (1990-2004 for CPE and 1998-2004 for SC and HSC) and establish, inter-alia, the contemporary National Educational Achievement profile for Mauritius, through a mix of quantitative and qualitative analyses. It will provide insights into a number of Educational Achievement classifications like the comparability of gender performances, the core subjects (English and Mathematics) performance profile, the school performance aggregates in respective denominational and geographical location distributions.

Phase I will produce an exhaustive list of statistical tables and graphs to reflect the 14 year history (1990-2004 for CPE and 1998-2004 for SC and HSC) of Educational Achievement. The significance of this chunk of research is multifold. It will, at one shot, provide a critical assessment of the various facets of the local Educational Achievement which will be of capital importance to policy makers, school authorities and other stakeholders and researchers in education. It will prove, explain and structure many of the conceptions which have characterised or underpinned the national educational debate, but will also disprove a number of misconceptions conjecturally developed and nurtured when debates have slipped into polemics. It will provide a clearer view of the national educational track record, call for fresh conceptions and create new predispositions across the board for the further development of the educational agenda. It will inform eventual debates and decisions relevant to education.

Educational achievement is, as most of the issues in education, of interdisciplinary concern. Its growing importance in the field of educational research is evidenced by the volume of literature produced by researchers hailing from different research traditions and disciplines (approximately 100 in the USA only, since 1970s according to ERIC). Basically two disciplines have made major and historical contributions to understanding this complex phenomenon: psychology and sociology.

The former has been dominated till the 1980s by the psychometric paradigm which based itself on the assumption of innate ability embodied in the much-accepted notion of intellectual quotient but, has been revisited more recently by Murray and Hernnstein (1994). In fact, this stand point has continued to dominate educational thought despite the emergence of alternative theories of learning collectively referred to as constructivism. Those theories, while enhancing our understanding of how people learn, also highlight the conditional influences operating on educational achievement embedded simultaneously in concepts related to psychology such as self-concept (Muijs, 1997), personality traits (Merrell and Tymms, 2001), and motivation and those falling under the jurisdiction of sociology, namely, cultural and social capital (De Graaf, De Graaf and Kraafkamp, 2000), language deficits and the multidimensional influences of the family (Sin Kwok Wong, 1998) and political ideology of the state (Bourdieu and Passeron, 1997).

Views tend to converge increasingly : one school of educational psychology has firmly anchored its approach to studying educational achievement in a social framework, recognising that the individual's personal dispositions is shaped in a complex social matrix (Ganzach, 2000) whether inside or outside school. Sociologists, for their part, ever since the neo-Marxists (Bowles and Gintis 1976, Boudon 1974) have been constantly struggling with the interrelationship among concepts of class, cultural capital, gender, and ideology (both within the school in the guise of the hidden curriculum or outside with the family and neighbourhood) as a means of explaining observed trends in educational achievement. The recent years, however, have witnessed a toning down of radical neo-marxist outlook; a perspective brought about by a grounded theory approach to research and the widespread use of critical ethnography. In fact, the sociology of education, in general, has undergone a radical paradigm shift as researchers are embracing a refurbished notion of social epistemology in the form of the interpretive approach.

Locally, some of the above mentioned concepts have been investigated using descriptive data and interpreted with a view to enhance understanding of the origins and manifestations of inequality in education (Bunwaree, 2002) and not directly addressing the issue of educational achievement. Research in this field has also been on a small scale, subject specific (David, 1992) and focusing on one factor influencing Educational Achievement (Malleck, 1978 and Jeetun, 1993) or part of a research project on a related issue (Griffiths 1998, Kulpoo 1998).

1.3 Aims and objectives of the Research

Phase I

Aim: To analyse the overall CPE, SC and HSC examinations results with a view to establish a general statistical profile of Educational Achievement in Mauritius .

- To establish the trends, if any, in Educational Achievement at the level of CPE, SC and HSC results in terms of graded performances (average, low and high)
- To produce Educational Achievement profiles at the level of those three examinations in terms of national aggregates of subject performances in English Language and Mathematics.
- To develop school performance differentials in denominational (state, private and confessional) and
- To map differential Educational Achievement, if any, in terms of gender differences.

Phase II

To map the contextual influences on the local Educational Achievement configuration.

- To conceptualize the roles of neighbourhoods/ communities as intermediaries between the State and the people in influencing community dispositions towards the Educational Agenda.
- To develop a critical understanding of **family processes** relevant to educational achievement.
- To develop a grounded theory perspective for richer critical readings of educational achievement.
- To establish, on a case study, the profile of success stories and non success stories of High/Low achiever participants.

1.4 Limitations of the Study

Since data obtained from the Mauritius Examination Syndicate was anonymous individual performance (CPE, SC and HSC) could not be traced and analysed. Data obtained from schools were limited to the fact that individual records were not complete for all three examinations. Thus a large number of records had to be rejected. With respect to the survey the data obtained was incomplete for a number of cases as some respondents could not recall some information pertaining to the past (eg. their CPE result, specific events during their school days etc.) It was also observed that some respondents were reluctant to reveal their examination results to the enumerator. This issue was considered by asking the respondent to complete the specific parts and return the questionnaire anonymously in sealed envelopes. Locating respondent with specific selection criteria was difficult. Selected respondents were not able to give appointment in short delays and those not willing to give personal information took longer time to return questionnaire which they were filling themselves. This resulted a longer period for field data collection.

There is also a need to highlight that the initial research objectives included ethnicity as a pointer for differential educational achievement. The basic source of data which was actively sought was the individual results with the names of students. However, it was not possible to get access to the data from the MES even for the purpose of research. The ethnic dimension would have added to the scope and ramifications of the research findings and enabled a deeper understanding of the key processes at work in a multi-ethnic state like Mauritius. However, the ethnic dimension was introduced in Phase II of the research in the course of developing insights into the life stories of participants.

It is a severe loss to the community of researchers in Mauritius to be deprived of such a rich source of data which could enhance understanding and enable targeted actions. Now is a most opportune time to reflect on issues of access of data for research purposes when such practices are considered as acceptable and even actively promoted in other countries. There is to be more coherence about the discourse of policy makers who claim to want to promote research and institutions which “safeguard” data.

1.5 Definition of Terms and Concepts

Educational Achievement relates here to the grades obtained at the level of CPE, SC and HSC examinations. Achievement is a broader concept and which includes of both performance and attainment.

Life achievement is measured in terms of professional success, social mobility achieved and personal sense of accomplishment.

1.6 The Research Methodology

Given that the research has two distinct yet related phases and that the objectives are different, two research approaches were used. Phase I provided the quantitative background required to map out the educational achievement landscape. Phase II focused on the micro processes which could, to a certain extent, provide general background information to explain the factors which impinge jointly on educational and life achievement observed. It was further broken into two stages. The first one collected data about individual pathways and on the broad parameters which influenced the educational achievement of the population under study. The second stage of Phase II involved 13 case studies (extracted mostly from the larger sample) of varied profile and sought to understand in depth the circumstances which influence individual trajectory.

Indeed phases I and II telescoped into one another to give both the macro picture and micro perspective on educational achievement.

1.6.1 Phase I

Since Phase I aimed at mapping out educational achievement by analyzing CPE, SC and HSC results, to establish trends and patterns the major research instrument used was document analysis in a desk mode approach. The electronic records of the MES for CPE 1990-2004, SC and HSC 1998-2004 were examined and processed. The objectives of phase I guided the data analysis and set the parameters in terms of gender, school type, subject differences and low, average and high achievement. (The lesser number of years for SC and HSC, though a limitation of the study, enables the coverage of a 14 year span and the study of a complete cohort during their 14 years of schooling. Those who sat for their HSC in 2004 must have completed their CPE in 1997. If we assume that students did not repeat years, those who sat for HSC in 1998 took their CPE exams in 1991)

1.6.2 Data Sources for Phase I

First hand data from the Mauritius Examinations Syndicate for the period 1990-2004 for the Certificate of Primary Education, 1998-2004 for the School and Higher School Certificate. This data consisted of anonymous individual entries for each candidate at the CPE levels in terms of the grades achieved in each subject. The data provided to us was classified as per the school codes.

The data obtained were constructed in a database (using MS Access) with respective classifications criteria defined (gender, ethnic group, etc). Entries were validated and verified for data capture errors using both automated and manual methods. A non-significant number of records were rejected for inconsistencies.

Relevant tables of aggregates, mainly counts, were extracted in respect to criteria specified. It is to be noted that the number of students taking part in the examinations over the years and in respect to the classification criteria were not the same. Thus the results were interpreted in terms of percentages for possibility of comparisons. Data was further analysed for trends over the years and has been expressed graphically.

1.7 Phase II

It aimed at producing a different set of data in conjunction with the statistics produced in Phase I. Initially a survey focusing on nested data on individuals, families, and communities regarding the relative impact of family and school effects on educational outcomes was carried. This was topped up by a qualitative investigation to illuminate gaps or interesting issues identified above.

1.7.1 Phase II-Stage I

1.7.1.1 The Sample:

The sample consisted of 1940 respondents aged between 25- 40. A stratified sampling process was used to ensure representativeness of the population and the distribution is as follows:

AgeGroup	Female	Male	NA	Total
25 - 27	14.8	16.2	0.4	31.5
28 - 31	9.4	12.6	0.3	22.2
32 - 34	6.2	6.4	0.2	12.8
35 - 37	6.0	6.2	0.4	12.7
38 - 40	9.1	9.8	0.8	19.7
NA	0.5	0.6	0.1	1.2
Total	46.0	51.8	2.2	100.0

Religion	Female	Male	Total
Hindu	22.5	24.8	47.2
Christian	12.3	13.1	25.4
Islamic	7.8	9.8	17.6
Buddhism	0.1	0.1	0.3
Other	0.3	0.5	0.7
Non-Believers	0.3	0.3	0.6
NA	3.8	4.4	8.2
Total	47.0	53.0	100.0

The sample was also balanced in terms of respondents' location. But given the specificity of the Mauritian context and the geographical mobility of people and their affiliation which is not necessarily geographically determined, the geographical denominator was used in the stratified random sampling process.

1.7.1.2 The Data Collection Instrument

A questionnaire (see Appendix 1) was designed to collect data on individual educational achievement and trajectories. It aimed at collecting data on the backgrounds of the respondents, their family culture, their role models as per the parameters defined in the theoretical background. However, the questionnaire prepared the ground also for identifying participants for stage II

1.7.1.3 The Data Collection Process

Fieldworkers who numbered 52 in all were, for the most, secondary school teachers who had followed a course on research methodology. They were further given an additional training session by the research team. Enumerator sheets were provided so that the records about respondents could be maintained and effectively used to track down respondents. During the training session, they were briefed about the aims of the research and the required profile of respondents and the sampling needs.

Data was collected over a period of 9 months (April 2004-Dec 2004)) and processed using MS access.

1.7.2 Phase II Stage II

Stage II of the research aimed at investigating the typical family traditions of childrearing and upbringing and the cultural processes developed therein which explain how the different family traditions have, on their own or in conjunction with the community, evolved models of educational success or non achievement. It also focused on the influences which the socio-religious congregations have produced on families in founding the respective styles of *modus vivendi* and the place and importance of Educational Achievement therein.

A case study approach was used to establish the profile of success stories and non success stories. Using qualitative methods, it established the deeper contextual factors which shape both educational and life achievement. Whereas in the precedent section data was collected by means of a questionnaire and the relationship between different aspects of parents' capital examined more quantitatively, this part focuses on an insight which is based on a holistic perspective. Drawing from the life stories of a sample of individuals selected mainly from Phase I respondents, the social family, cultural configurations of the individual pathways are mapped out to produce a grounded understanding of the interaction between the individual, the micro, meso and macro levels.

1.7.2.1 The Sample

For stage II of Phase II, 15 respondents with the desired profile were initially selected based on the questionnaire. However, 3 were unwilling to participate and it was not possible to fix an appointment with the 2 other participants. A reputational strategy was used to compensate for the loss of 5 participants.

Some participants were identified through the questionnaire filling exercise. Since the questionnaire were coded, it allowed us to trace back people with the required profile. However, since all the 15 participants identified were not agreeable to the interview, two additional participants had to be handpicked according to the requirements of the study. A reputational sampling technique was used

together with a systematic tracking. The desired profile was sketched and conveyed to fieldworkers involved in the phase of questionnaire administration. Participants were then selected based on a number of criteria, as described below:

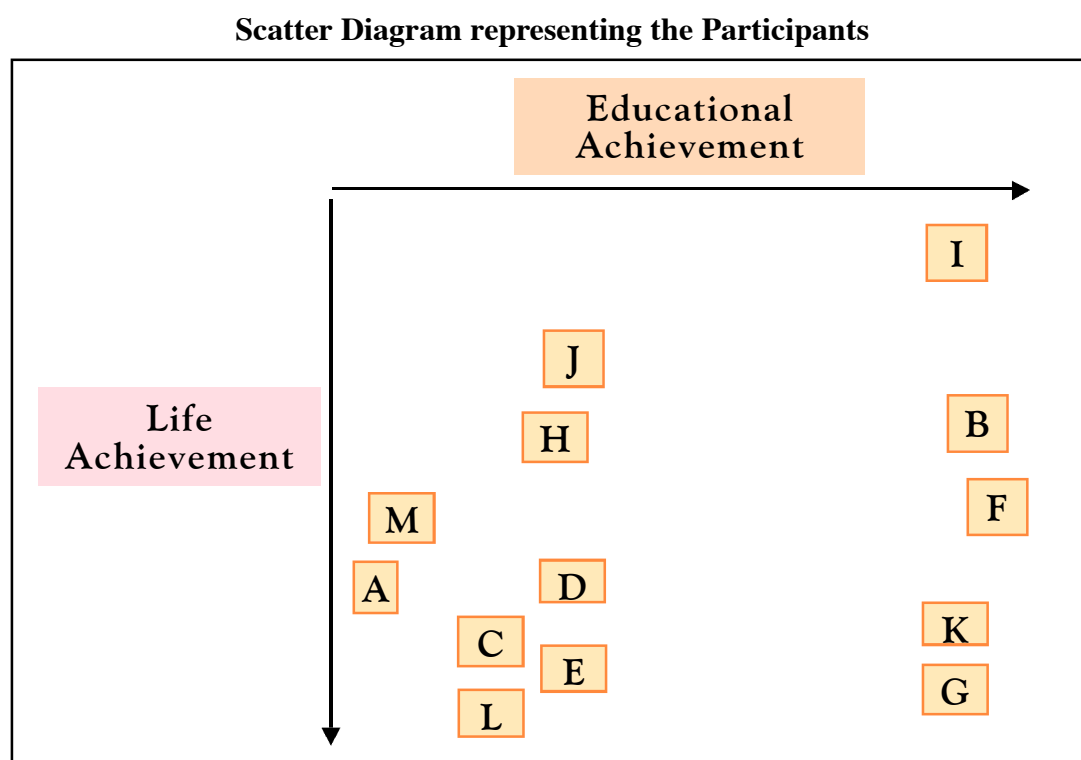
- Their family/ class profile: care was taken to choose participants basically from a relatively working class milieu and from a middle class background (lower and upper). Our main focus was to unveil the intergenerational processes and the environmental (more specifically) factors which impact on achievement, it was crucial to identify participants who had, on the one hand, succeeded as students and, on the other hand, also succeeded in life. This particular sample would generate an understanding of the key factors in a person's environment which determined his/her educational trajectory. Another sample of participants included those who succeeded with little or no educational backup. Historically, in Mauritius, the education has been the most common means of social mobility especially in late 1980s and early 1990s.
- Their life achievement: since the present study sought to uncover the interrelationship between educational achievement and life achievement, individuals were selected according to these 2 criteria.

Educational achievement is defined as being inclusive of educational attainment and the performance at the level of end of cycle examinations. Life achievement is defined by the career success either at a professional level or business level.

Out of the four categories defined, participants selected for the interview belonged to either:

- (a) High educational and high life achievement
- (b) Low educational and high life achievement
- (c) High educational and "low to moderate" life achievement
- (d) Low educational achievement and "low to moderate" life achievement

The graph below locates each participant on the spectrum of low to high achievement.



Additionally, in order to obtain background information on the general historical, social and educational orientation of the country during the period under study, four interviews were carried out with historians and members of socio-cultural/ socio-religious organizations to gather data on the developments taking place at the meso level, that is, the community. These participants were selected on the basis of their close and sustained involvement in community based activities especially in matters related to education.

1.7.2.2 Summary of Profile

	Ethnicity	Parent's family type	Sex	Age	Origin	Class (Parents)	Class Current	Educational Ach.	Life Ach.
A	Asian (Muslim)	Reconstituted	M	38	Suburban	Working	Upper Middle	LOW	Moderate to High
B	Creole	Extended	F	32	Rural	Working	Middle	High	Moderate
C	Asian (Hindu)	Extended	M	40	Rural	Middle	Upper	Low to Moderate	High
D	Asian (Chinese)	Nuclear	F	29	Rural	Middle	Upper	Low to Moderate	High
E	Creole	Extended	M	35	Suburban	Working	Upper	Moderate	High
F	Asian (Hindu)	Nuclear	F	33	Suburban	Lower Middle	Upper Middle	High	Moderate to High
G	Asian (Hindu)	Single	M	40	Suburban	Working	Upper Middle	Moderate to High	High
H	Asian (Hindu)	Nuclear	M	38	Urban	Upper Middle	Upper Middle	Moderate	Low to Moderate
I	Asian (Muslim)	Extended	F	32	Rural	Lower Middle	Upper	High	Low
J	Mixed (Asian/ Creole)	Nuclear	M	36	Urban	Working	Middle	Low	Moderate to High
K	Asian (Hindu)	Nuclear	M	28	Urban	Upper	Upper	High	High
L	Mixed (Asian/ Creole)	Extended	M	34	Rural	Lower Middle	Upper	Low	High
M	Creole	Nuclear	F	28	Suburban	Working	Middle	Low	Moderate to High

1.7.2.3 The Data collection Instrument

Interviews, wide ranging, confidential, anonymous and, giving participant every encouragement to express their views and give as far as possible an account of their life trajectories, were at the heart of the data collection instruments. The interviews were semi-structured in nature and the following guidelines were used:

- Description of current achievement/ professional orientation
- Description of professional pathway
- Identification of key figures
- Analysis of the motivating factors/ persons
- Description of family characteristics including relation with siblings and significant others
- Discussion of educational trajectories and description of educational experiences

Each individual interview lasted for one to one and a half hours. They were tape-recorded and transcripts were produced.

Chapter 2

Analysis of Examinations Trends- CPE

2.1 Background Information on the Certificate of Primary Education

Schooling in Mauritius is tailored according to the 6+5+2 system. Children usually start school at the age of 5 and take part in major examinations, the Certificate of Primary Education (CPE) examinations at the end of six years of primary schooling. The CPE Examination, which marks the completion of the primary cycle, fulfilled two clear functions in replacement of its two predecessors the Primary School Leaving Certificate and the Junior Scholarship Examinations. On the one hand, it is a means of assessment used for certifying attainment. (The 2001 Reform, which advocated regionalization, meant to reinstate this primary role of the end of primary examinations as a means of grading and certification). On the other hand, the CPE served to establish achievement and eligibility for secondary schooling. The ranking system allocated a particular secondary school to the first 2000 boys and girls.

From a historical perspective, the CPE is one of the most important and yet controversial issues in the context of the Mauritian education system. Since the advent of free primary in education in 1977, which opened access to secondary education, an alternative system of selection became necessary to replace economic selection and channel students to the limited number of secondary schools available. As pointed out in the Richard report 1976:

“the number of places for (secondary schools) is limited to about 10,000 for the 40,000 who sit the Primary School Leaving Certificate Examination.”

The CPE from that time and till today, is perceived in the eyes of the public, as a mechanism which is based on meritocracy. A significant change in perception was achieved only momentarily with the 2001 reform when the government wished to emphasize the certification purpose. It is often assumed that the two perspectives from which the CPE can be viewed, that is certification and selection, have implications for achievement trends. Two schools of thought prevail: it is believed that the selection purpose of the CPE by encouraging competition enhances the level of performance of all students; the alternative view holds that the selection agenda disrupts chances of a large majority for whom the CPE is viewed primarily as a means of certification.

The subjects taught at the CPE level have also evolved since 2001. The traditional subjects were English, French, Mathematics and Environmental Science. The curricular reforms in 2001 introduced two subjects in replacement of the last mentioned namely Geography and History as well as the inclusion of Creative Education. Physical Education as well as Asian/Arabic Languages, namely Hindi, Telugu, Tamil, Marathi, Modern Chinese and Arabic were maintained as optional. However, not all subjects are examinable. Creative Education and Physical Education are non examinable and the Asian and Arabic languages are optional, though, they could be used to determine a child's aggregate score.

Pass rate at the CPE examinations is considered as an important barometer of success of education in Mauritius, in general, because it is assumed to be reflective of the quality of education being provided at the level of primary education. Examining the achievement and success rates at the CPE level is an important exercise for two additional reasons. Firstly, a third of the total budget allocation to education goes to the primary sector of education, with some 8,331 employees (4,422 male and 3,909 female) on the staff the primary schools. The stated 31.8% investment in primary education is significant compared to other areas of education and extends to training of teachers, the upgrading of infrastructure and other facilities. It thus becomes important to assess the cost effectiveness of the huge investment made. One way of measuring the returns is to consider achievement of students at both a general (pass/ fail) level and a specific level (pass/ fail at subject level) and to analyse trends in performance at the level of national examinations. However, the present study goes beyond the very rudimentary pass/fail analysis insofar as the break down among passes is considered across five examinable subjects at CPE level. Secondly, if the focus today in education is to be on quality, analysis has to be accurate, identifying the trends in core subjects with respect to variables which are indicative of systemic processes at work. Descriptive statistical groundwork must necessarily open the way to more analytical studies. For example, high rates of enrolment are indicative of increased access to education but the real concern cannot, in a country like Mauritius, be limited to the quasi success of universal primary education. Rates of enrolment show entry at the level of primary education but there are still a significant number who do not complete primary education or are not successful in their examinations.

2.2 The Data

The data source for this analysis is a set of raw and individual data entries for the CPE. We have proceeded in the following way:

Firstly overall statistics regarding the primary school population distribution are analysed as well as percentage rates of absenteeism. This is followed by subject distribution analysis which will provide insights into the trends regarding failure across subjects. The data regarding passes is further broken down in terms of grades per subject in order to generate understanding with regard to comparative performances in subjects. The differential gender achievement levels is also scrutinized in the following sections. In our last section the meso variables are considered with a focus on school performance classification. This section specifically deals with the estimated distribution of students in the different categories of schools. The school category is defined at two levels. Firstly at the level of achievement profiles- we have distinguished here among star, high achieving, average achieving, low achieving and ZEP schools. Secondly the notion of school type is also inclusive of the geographical location of the school.

2.3 Rationale

One basic aim in measuring achievement and trends in achievement is to determine whether set targets, if they do exist at a national level, are achieved. In addition, given the extensive and continuing effort at all levels of government to improve the public educational system, a careful appraisal of the trends at the level of 3 crucial examinations will also serve to gauge the progress made over the years.

Unlike a number of countries where benchmarks and targets are set at national level and regular comparative studies are carried out over time to assess trends in achievement, in Mauritius the CPE,

SC and HSC examinations are considered as the equivalent of national achievement tests. Though they are not achievement test in the strict sense of the term because, they do not measure generic skills, but rather mastery in various aspects of subjects discipline. In public perception, success rate at the level of these three examinations is construed as the most reliable indicator of achievement. Such a perception is reinforced and validated by the media attention attributed to the results and the fact that often the broad statistics are used as indicators of progress by politicians. Data about student achievement at the level of these examinations constitute, one major source of data, if not the only source of data on educational progress in Mauritius. However, no comprehensive study has been carried out on the trends in achievement using the data available at the level of CPE, SC and HSC. Though the MES produces reports using the data for a period of at most 5 years, a consistent study has never been undertaken for any of these examinations- an unexpected feature in a country where political discourses have become polemical on issues on education and each government has tried to implement reforms in education.

It is indeed surprising that the volume of data available at the MES has never been systematically used to build an empirical database. The conspicuous absence of such a database limits and, often, clouds education debates which is more often than not, informed by opinions rather than empirical evidence.

The current debate in education and the concern with reform in education bears testimony to the importance and implications of this study. There is, as the situation stands today, no historical precedence of an exercise of the scope afforded by the present endeavour, though figures about the pass and fail grade across subject, gender have been till 1997 only sporadically made available. It is only after 1997 that more systematic and regular reports are produced yearly covering broad areas of analysis.

The literature on educational achievement reveals the controversies and conflicting evidence about past generalizations regarding the differential effects of family background and school factors. Determinants of educational achievement are strongly influenced by socio-economic factors, family and cultural background.

2.4 Population Distribution of CPE Students

No of Students taking CPE Exams				% of Students		
YEAR	Boys	Girls	Total	YEAR	Boys	Girls
1990	18076	16889	34965	1990	51.7	48.3
1991	20094	18735	38829	1991	51.7	48.3
1992	20007	19062	39069	1992	51.2	48.8
1993	18562	17623	36185	1993	51.3	48.7
1994	16915	15900	32815	1994	51.5	48.5
1995	15928	14939	30867	1995	51.6	48.4
1996	N/A	N/A	N/A	1996	N/A	N/A
1997	14623	13438	28061	1997	52.1	47.9
1998	14286	13484	27770	1998	51.4	48.6
1999	15061	14087	29148	1999	51.7	48.3
2000	16502	15169	31671	2000	52.1	47.9
2001	17130	15550	32680	2001	52.4	47.6
2002	16197	14533	30730	2002	52.7	47.3
2003	16234	14509	30743	2003	52.8	47.2
2004	16043	14626	30669	2004	52.3	47.7
Min	14286.0	13438.0	27770.0	Min	51.2	47.2
Max	20094.0	19062.0	39069.0	Max	52.8	48.8
Avg	16737.1	15511.9	32249.0	Avg	0.5	48.1
SD	1837.1	1853.8	3678.1	SD	51.9	0.5

No data available for 1996

The population of CPE examinees has remained fairly stable despite the drop between 1997-2000 with a consistently higher percentage of boys on average compared to girls (51.9% to 48.1%). Variations in the school population is not in direct proportionality with the composition of the population where the number of females is higher than the number of males (Census 1994).

While a number of possible explanations can be put forward to explain this phenomena, the literature on differential enrolment has remained scanty in the Mauritian context except for the work of Bunwaree(1997). She noted that a three percentage point difference in attainment in 1983 which could mean that girls do attend schools but do not take part in end of cycle exams. One has to be cautious as to the dangers of making sweeping generalizations based on a single percentage. The intricacies of any situation or any systemic trend cannot be encapsulated in one or two percentages but must be understood in the context of the macro and micro variables at play.

2.5 Percentage Distribution of Absenteeism by Subject

YEAR	Eng	Fre	Mat	EVS/ S/H/G* ¹	ASI
1990	4.5	4.6	4.5	4.5	7.9
1991	4.8	4.8	4.8	4.8	8.0
1992	4.6	4.5	4.6	4.6	6.4
1993	4.2	4.2	4.3	4.3	5.9
1994	5.1	5.1	5.1	5.1	6.0
1995	5.1	5.1	5.1	5.0	6.2
1997	4.6	4.6	4.6	4.6	5.1
1998	4.0	4.0	4.0	4.0	4.9
1999	3.9	3.9	3.9	3.9	5.2
2000	4.2	4.2	4.1	4.1	NA
2001	3.7	3.7	3.7	3.7	5.2
2002	3.0	3.0	3.0	3.0	3.9
2003	2.6	2.7	2.7	2.6	3.9
2004	2.1	2.1	2.1	2.1	3.8
AVG	4.0	4.0	4.0	4.0	5.2

The data reveals a general downward trend in the rate of absenteeism. This must be understood and interpreted in the context of the legal provision for compulsory primary education and the greater social awareness of the parents about the importance of education. Much of this changing culture in education, has been initiated and mediated at the level of secondary agents of socialisation such as the neighbourhood or community or even the media. It is also to be noted that post independence government policy of education was set in line with the Education for All policy of UNESCO and it is no small achievement that Mauritius is one of the few countries in the Africa Sub-Saharan region with the highest net enrolment rates. However, as shown by this table, today still around 3% (around 850) of the total CPE student population do not take the examinations across all subjects. When referring to the issue of access at primary level, two aspects need to be considered. Firstly the net enrolment rate and secondly the attainment level. While gross intake rates in Mauritius have hovered around 94 (Education for All, Global Monitoring report, 2002) with a higher intake for girls, the attainment level has remained low a failure rate approximating 30% consistently every year. In addition to this, if the participation rate at secondary level is taken to be a rough indicator of completion of primary education, then again the net enrolment rates are only of 72% (Education for All, Global Monitoring report, 2002).

It is also noteworthy to highlight the higher rates of absenteeism for Asian languages and Arabic, on average 1.2 percentage points higher meaning that some students drop this component only while they take examinations in other subjects. It does seem that around 300 students take the core subjects and not their options though they have registered for it.

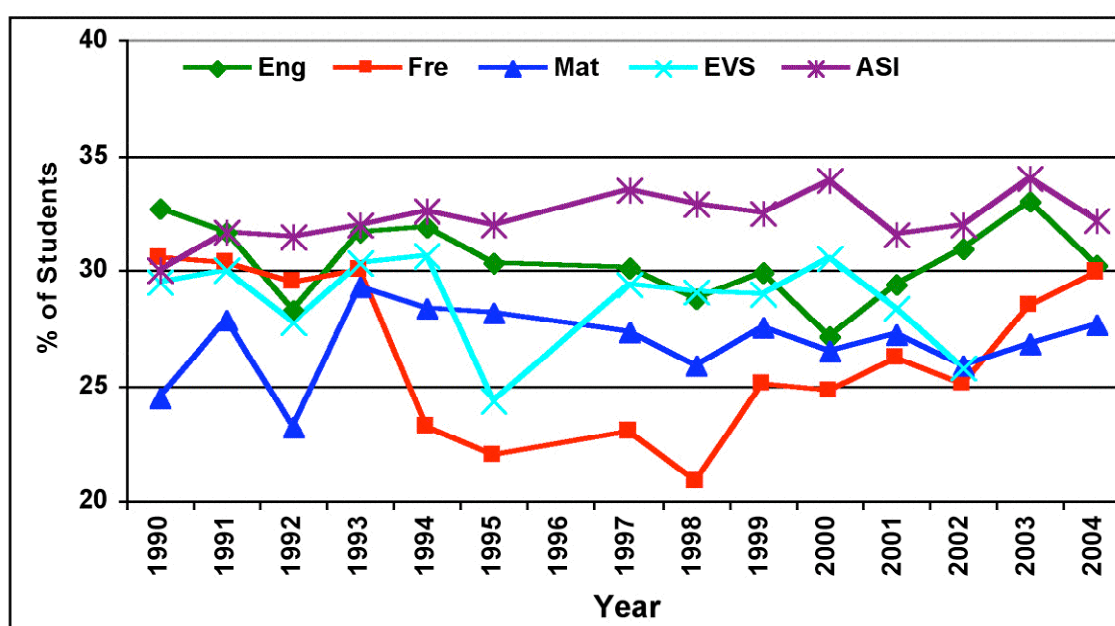
¹ *Science, History and Geography replaced Environmental Studies as from 2002

2.6 Failure Rate by subject (1990 to 2004) at CPE level

YEAR	Eng	Fre	Mat	EVS/ S/H/G*2	ASI	Hgeo
1990	32.7	30.5	24.4	29.5	30.0	
1991	31.6	30.3	27.8	30.0	31.6	
1992	28.2	29.5	23.2	27.7	31.4	
1993	31.6	30.0	29.3	30.3	32.0	
1994	31.9	23.2	28.3	30.6	32.6	
1995	30.3	22.0	28.1	24.3	32.0	
1997	30.1	23.0	27.3	29.4	33.5	
1998	28.8	20.8	25.9	29.1	32.9	
1999	29.9	25.1	27.5	29.0	32.5	
2000	27.1	24.7	26.5	30.5	33.9	
2001	29.4	26.2	27.2	28.3	31.5	
2002	30.9	25.1	25.9	25.8	32.0	
2003	33.0	28.5	26.8	-	34.0	26.4
2004	30.2	29.9	27.6	-	32.2	23.2
AVG	30.4	26.3	26.8	28.7	32.3	24.8

It will be interesting to examine whether the trend continues when Asian Language is included as an alternative subject for computing aggregate.

Failure Rate by subject (1990 to 2004)



From the data above, two trends have to be noted. Firstly, the high average rates of failure, hovering between 26-32 in core subjects, indicating that possibly a large proportion of students are failing consistently across the board. Secondly, failure rate in Asian Language is highest when compared to failure in other subjects and has generally been constant over the years.

Failure rate in French Language was low during 1994 to 1998 and has shown an increasing trend after 1998, moving from 20.8% to its highest level of 29.9% in 2004 somewhere equivalent to the tendencies of 1990 to 1993 where it was constantly high. At first sight, French language was in general the subject with comparatively lowest failure rates over the years, more precisely after 1993. the trend beginning 1999 is however troubling and indicates a deterioration which is unabated till 2004. However, the failure percentage has been more than that of Maths for the past two years. Compared to English, the failure rates are not only lower over the 14 year period but we will see in the next section, there are also qualitative differences.

Failure rates in Maths and English show similar trends with a constant decline from 1993 up to 2000 for English and 2002 for Mathematics after which an increasing trend was observed. Trends of failure rates in EVS have generally been constant with exceptional drops in 1995 and 2002. The failure rates for Asian Languages have consistently been above 30% but failure rates for all three languages are high. Failure rates in Maths and English shows similar trends with a constant decline from 1993 up to 2000 after which an increasing trend was observed.

The failure rates must be necessarily interpreted in the context of the implications for mastery of essential learning competencies in the domain of literacy and numeracy. Using the guidelines established by UNESCO and UNICEF (1992-1994) as an international referent and the sets of learning competencies defined by the Mauritius Examinations Syndicate (1992) as a local referent, the following can be highlighted:

- (i) On the 44 basic learning competencies defined for literacy, in Mauritius only 11 are assessed (Monitoring Education for All, 1994).
- (ii) Despite the fact, the basic competencies are not fully explored, desirable learning competencies, which “represent higher order skills and meant to stretch students beyond basic competencies and are, as such addressed to the high ability group.”, accounts for 40% of marks across all syllabuses.

How far is this practice present in other systems? Are we not setting the standards too high at an early stage thereby condemning unfairly a large section of the primary school population. The only direction to which we can hint relates to the possible dissonance between our standards and those set in other countries. The gap in research regarding comparative analysis of our system with other countries at similar levels of development must be overcome, if we are to make any final conclusion regarding achievement and quality at CPE level.

Analysis of CPE examinations report throws light on the fact that, for a large percentage of students, the basic skills are not mastered across all languages. In English particularly, the 2002 Report on CPE examinations highlights:

“It pains to note that 30.6 % of candidates who have been taught English for 6 and 7 years in our primary schools scored 0 marks in question 3- a writing skill test based on sentence completion in the context of a familiar situation. The same output is further confirmed by question 6- composition writing where 30.27 % scored 0.”

In the very same document, the examiners reported that more than 34% of girls and 43% of boys taking part at the CPE examinations scored less than 40 marks (P 2). Similarly in a cumulative perspective, approximately 65% of total boys examinees and 55% of girls examinees have scored less than 60% (english) meaning on a rough estimate that they have not mastered all the essential learning competencies after 6-7 years of formal schooling where the medium of instruction is English.

It is also to be noted that achievement in English has been an area of concern since the late 1970s as highlighted in the Report of a study on causes of failure in PSLC Exams (Richard: 1976). In the summary of findings, he points out:

“the largest number of failures in English indicates that the teaching of English- the official medium of instruction and examinations needs careful consideration.”

While it is generally assumed that the pass mark is 40% the MES document clearly stipulates that pass mark is 30 with an overall aggregate of 35% in four highest scoring subjects ². From any perspective that we take on the issue of failure it becomes clear that overall pass marks are not fixed referents and as such the political discourse which judges about the success of a reform plan on overall pass marks is completely off the tangent and misleading.

² MES (1999) Regulations and Syllabuses

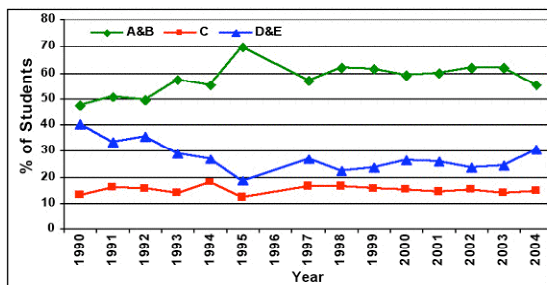
2.7 Analysis by Subject

2.7.1 Percentage Distribution of Grades among passes

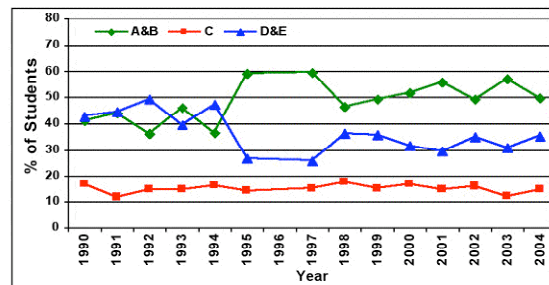
Defining what represents high, low and average achievement is necessarily an arbitrary decision. On a five grade scale A, B, C, D and E, the middle grade C was taken to be an indicator of average achievement representing roughly 80% of mastery of the minimum learning competencies. Once C is selected as average achievement D, E would fall into the category of low achievement with less than 50% being scored and A and B being representative of high achievement.

COMPARATIVE ANALYSIS OF SUBJECT IN TERMS OF HIGH, AVERAGE AND LOW ACHIEVEMENT

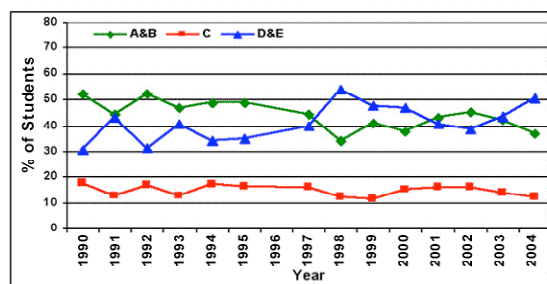
FRENCH



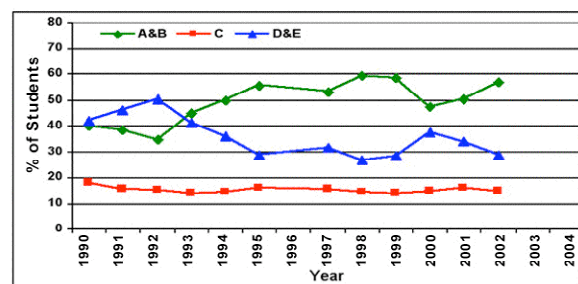
ENGLISH



MATHS



EVS

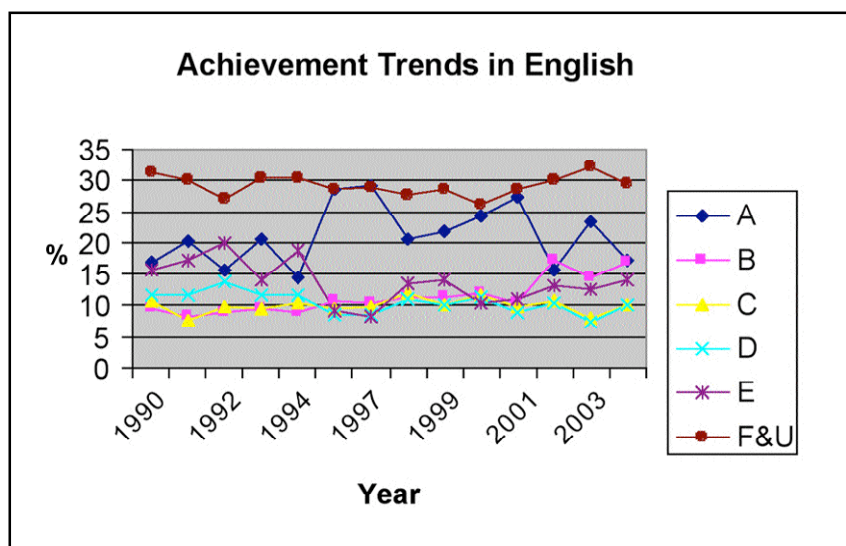


One striking set of observations can be made regarding the relationship between high and low achievement. Indistinctly, across all subject areas, low achievement (D and E) curves are an exact reflection of high achievements (A and B) curves while the C grade curve have remained stable. As with as any other examinations, a process of standardization of marks is applied to ensure that students are not unnecessarily penalized with variations in the level of the examinations papers and that achievement reflects the distribution of ability within a population which is according to the Normal curve. However, the percentage distribution 30-10- 30 (AB-C-DE) pattern which is

produced at the end of the standardization process is the exact opposite of the bell curve. Does this mean that ability in our CPE student population is so radically different from statistical prediction? Or, does it mean that, at the end of six or seven years of primary schooling, our system works only for the top 30% leaving on the side track the large majority of students? If this pattern reflects the mastery of our students on core skills, does it mean that our schools are not optimizing the potential of our students? What is even more troubling is the fact that; despite private tuition, parental inputs and the academic grooming, this is the best outcome our system is producing!

Public opinion appears to be divided on the issue of the high rate of failure. However, the data has revealed that it is not only failure which must be addressed but achievement across the board. The educational superstructure made up of the complex set of variables inclusive of school processes needs to be brought into the limelight. Could the variables in the superstructure be working at cross purposes?

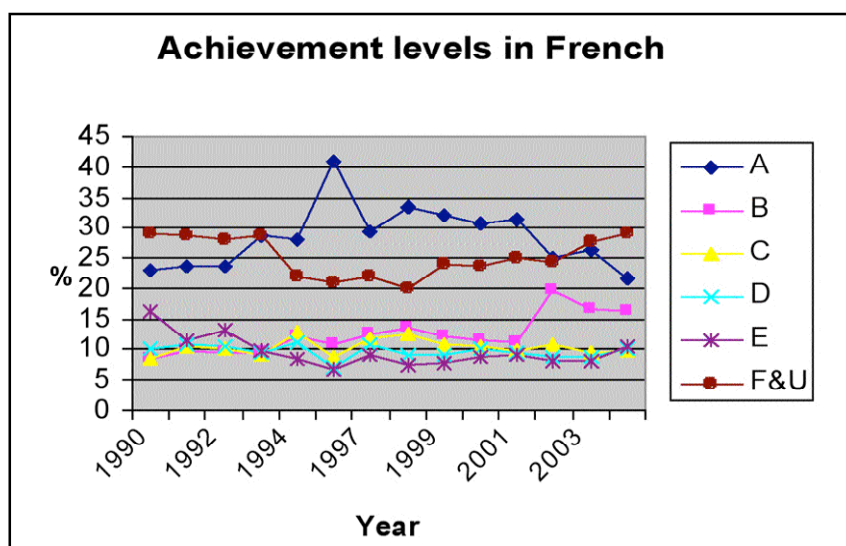
2.7.2 Percentage Distribution of Grades by Subject: English



Averages in terms of Categories

ENGLISH			
High	Average	Low	Fail
32.5	10	28.9	29.2

2.7.3 Percentage Distribution of Grades by Subject: French



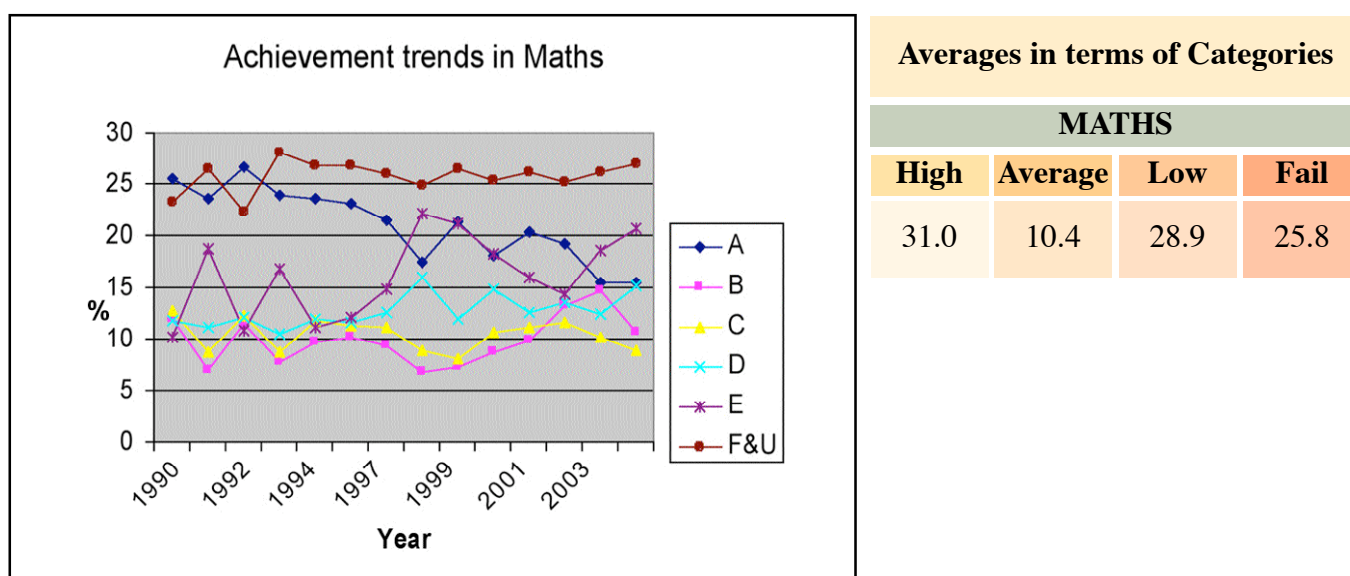
Averages in terms of Categories

FRENCH			
High	Average	Low	Fail
40.9	10.4	19.3	25.2

The data suggests marked skewness at the two performance poles with little fluctuation around the average. Any fluctuation in the performance on a yearly basis is absorbed in A and B or D and E. This pattern is repeated across most subjects with the A and B lines being mirror reflection of the D and E graph. One of the possible explanations is that such a structure is built in the examination papers and reproduces the achievement profiles being suggested by the data. What is also posited by the above analysis is that the examinations benchmarks are not fixed in terms of marks, for passes and failures (refer section 2.6). As such there are no fixed marks which corresponds to the various grades. We should be cautioned against the danger of interpreting the grades as fixed referents.

Overall, achievement levels in French are, over the seven year period, higher compared to any other subjects both in terms of percentage distribution of grades by subject and distribution of grades among passes. Two hypotheses can offer plausible explanations. The first one relates the greater visibility and presence of French in the social and cultural environment of the learner coupled with the proximity to the mother tongue. Secondly the format of the French question paper, which, compared to English, has a greater spread of marks over different items and section which tests desirable learning competencies involves 8 items rather than 6. However, the contradiction which needs to be highlighted is the fact that 60% of students still earn 0 in question eight which is the writing exercise. Examiners have noted that students cannot use language to write. (MES Report on CPE examinations, 2001). The phenomena of direct proportionality also affects performance in French as is poignantly visible in the graph above. Further analysis of trends in French demonstrates fluctuations and a downward trend for the period beginning 2001. While it took 7 years (1991-1998) to bring the failure rate down to 20% in French, analysis of the 1999-2004 achievement reveals that the failure rate has shot up to its 30% despite the reasons evoked.

2.7.4 Percentage Distribution of Grades by Subject: Mathematics



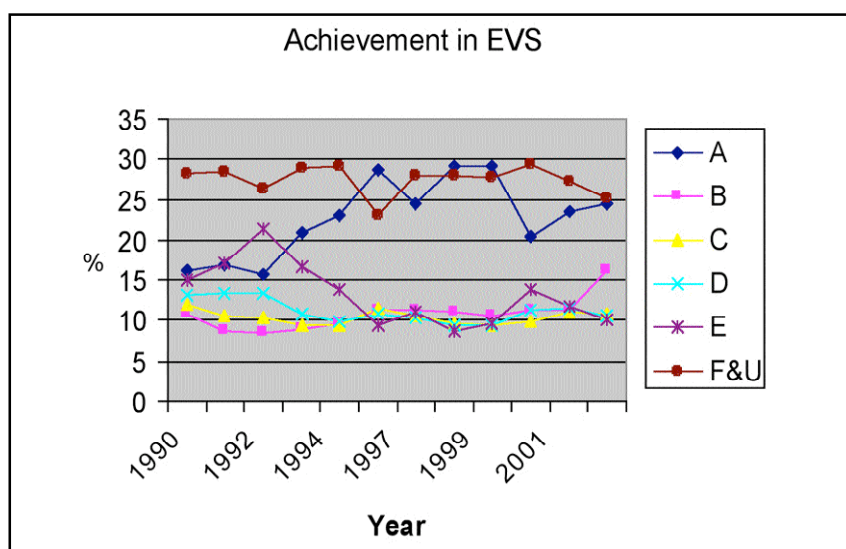
As from 1995, a generally declining trend is observed. It seems that the distribution is becoming increasingly skewed at the lower end. Unlike English language where the percentages in A and B among passes are becoming comparable, in Maths, there is increased distantiation between A and B grades though it is clear that, on the whole, lesser number of students are obtaining either an A or a B.

Maths skills are one of the core skills being examined at the level of CPE examinations. A number of issues could be potentially raised on the patterns produced by those statistics with respect to the declining performances in Maths. The question paper is divided into two clear parts- paper 1 carries 60% and paper 2 accounts for 40% - the first paper looks at the basic mathematics skills, the nature of questions set in paper 2 pertains to higher order thinking skills and probably serves to demarcate students in terms of those making it to a grade A or B. The lack of sustained progress in Mathematics in an era dominated by Science and Technology is a matter of serious concern. The skills being evaluated are the very building blocks of competencies required for further study in the scientific field. The Examiners Report for 2002 when commenting on the causes of poor performance highlights that:

“This was due to lack of confidence in grasping the underlying principles which was indicated by the use of the given data in any way that came to their mind, no matter it made sense or not.”

It does appear that each year a more or less stable proportion of students fail to acquire basic mathematical skills given that the standard deviation on failure is least for Mathematics (1.5). Examiners report have pointed out every year that many students have not developed the “mental strategies” require for effective problem solving in Mathematics which is indeed a worrying trend given the fact that teachers in primary schools in the 1990s and early 2000s still devoted the largest chunk of their teaching time to Mathematics. If concepts and skills are built spirally from primary to secondary education, then more than the content and standard procedures, the curriculum aims at building generic mathematical thinking skills which would be transferable later to general problem solving skills. An aim which has not been achieved in at least 42% of cases.

2.7.5 Percentage Distribution of Grades by Subject: EVS



Averages in terms of Categories

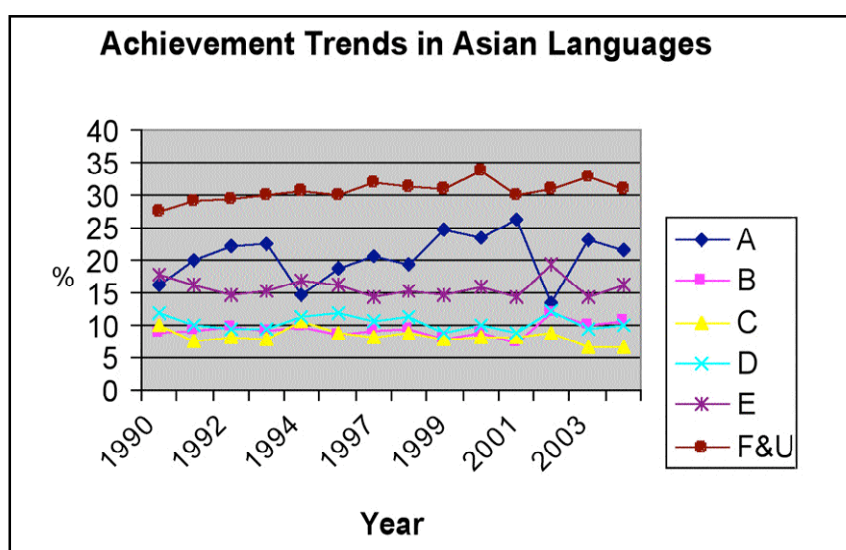
EVS			
High	Average	Low	Fail
33.5	10.4	24.3	27.5

% Distribution of Grades among passes

Achievement in EVS fluctuates greatly over the 14 year period under study, though generally showing a tendency towards improvement. The more encouraging trend observed in EVS can be possibly attributed to the nature of the subject since EVS may be interpreted as being a subject that offers more opportunities for vicarious learning than other subjects. It is also worth noting that

though the distribution of passes has improved, the level of failure has changed very little over the 14 years. The failure rates have decreased only by 3 % points over the 14 year period. Examiners have consistently pointed out that a lack of language skills explained to a large extent low achievement. In addition, it has also been pointed out achievement in the science components was higher than in other components of the EVS paper. It does appear that students fared better on questions relating to factual knowledge as compared to questions requiring higher order thinking skills which concretely meant that the mean score for Section B was less than for section A. For example, out of the total number of candidates who scored 40 or more marks in Section A only 26% scored 20 or more marks in Section B (MES, Report on CPE examinations, 2001).

2.7.6 Distribution of Grades by Subject: Asian Languages



Averages in terms of Categories

AL			
High	Average	Low	Fail
29.7	8.2	26.3	30.7

Performance in Asian Languages over the 14 year period under study has been more or less stable remaining below the general level of performance in other subjects. One remarkable drop in performance can be observed in 1994 and a rise in 1999. It is interesting to note that, despite the fact that the % of A among passes has changed from 14.7 % (1994) to 24.7% (1999), the percentage failure remained constant at around 30.7%. One interpretation that could be given is that a large number of students, 30% of those taking part in the exams, do not have the basic skills for mastery of the language. However, it has to be pointed out that fluctuations across different asian languages themselves (Arabic, Telugu etc) subjects and across different years is quite high though the failure rates across all asian languages are high (see CPE 2003 Grade Distribution Boys and Girls MES). The MES 2000 examinations statistics point out in a summative form trends in performance in Asian languages and Arabic as declining in all areas except for Hindi and Urdu, where the pass grade is more or less stable around 65%. For other languages, though it is generally higher than 65%, the pass percentages fluctuate greatly.

While the format across all Asian languages and Arabic over the period under study, are identical (Question 1 - Knowledge of grammar and words, question 2 – understanding, question 3- reading with understanding, question 4 - logical sequence and question 5 - writing through jumbled up sentences, question 6 - ability to apply and use knowledge of grammar, question 7 - reading with understanding through open ended items question 7 - writing skills through picture composition), there is a slight variation with the core languages but basically the same core skills are being tested. Furthermore, while it is true that the learning of a third language at primary level places an

additional burden on students it can also be argued that language skills are transferable. It therefore explains that for many Asian languages the failure rates have remained static over 14 years, the examiners had the following comment to make about question - 5 which was the writing exercise till 1994:

“..only a few of them were able to write a complete essay. Most of them were unable to do so because of a lack of vocabulary and poor command over the language.(Modern Standard Chinese). They could not even construct correct sentences..” (MES examiners report, 1994).

One plausible explanation which was offered by the Urdu examiners (1991) was:

“The general feeling on the part of teachers is that good grades can be obtained without writing a single word of urdu.” (MES examiners report, 1991).

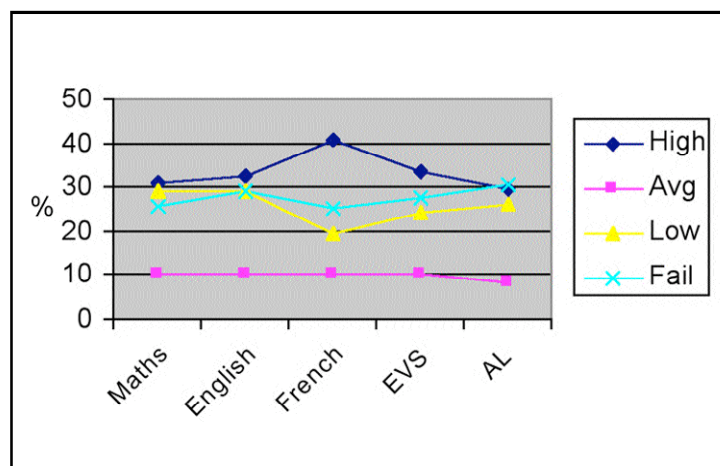
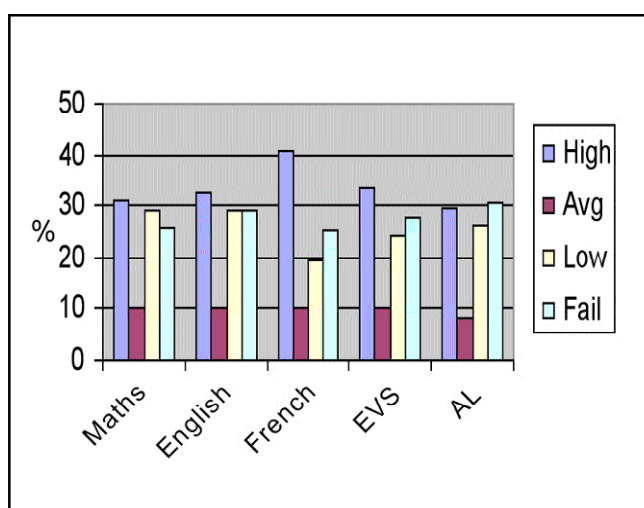
In 2000, the same comment was made by the urdu examiners:

“As usual, it was noticed that many candidates especially boys have not attempted this question (the essay).” (MES examiners report, 2000).

A comment which was echoed by other examiners in Asian Languages and Arabic except for Hindi where examiners noted an increasing number of candidates who attempted the essay question. It does appear that many candidates assume, given the paper structure, that they can score good marks in Asian languages without attempting the writing exercise. Such beliefs as expressed by the comment and, if as widespread as is suspected, raises a concern about the pedagogy which is used in the classroom. If one of the objectives of the curriculum is to develop language skills as part of a wider educational project to provide a liberal and broad based education which prepares the person for life, such practices are counterproductive. From an economic perspective, if millions are invested in the teaching and learning of languages, are such practices acceptable? Are the stakes of achievement so low and its definitions so narrow as to warrant “ beat the system” shortcuts? These issues become even more pertinent in the context of resource crunch and the need to prepare human resources in an era of globalization where a premium is placed on communications and linguistic skills. Furthermore, in comparison with English and French, it could be argued that French and English have benefited from greater visibility, library facilities and are the medium of instruction in schools. However, despite this, students are still clearing their examinations without meeting the writing requirements. It is high time to define our language policy in an intellectually honest way and engage in national debate on the teaching and learning of language and its place in the curriculum.

2.7.7 Overview of Means over the Years

Averages in terms of Categories				
	High	Average	Low	Fail
ENGLISH	32.5	10	28.9	29.2
FRENCH	40.9	10.4	19.3	25.2
MATHS	31.0	10.4	28.9	25.8
EVS	33.5	10.4	24.3	27.5
AL	29.7	8.2	26.3	30.7



The level achievement curve given in the figure above reveals that the mean achieved over the 14 year period across reveals a disquieting pattern with the high achievement curve being closest to the failure curve across almost all subjects.

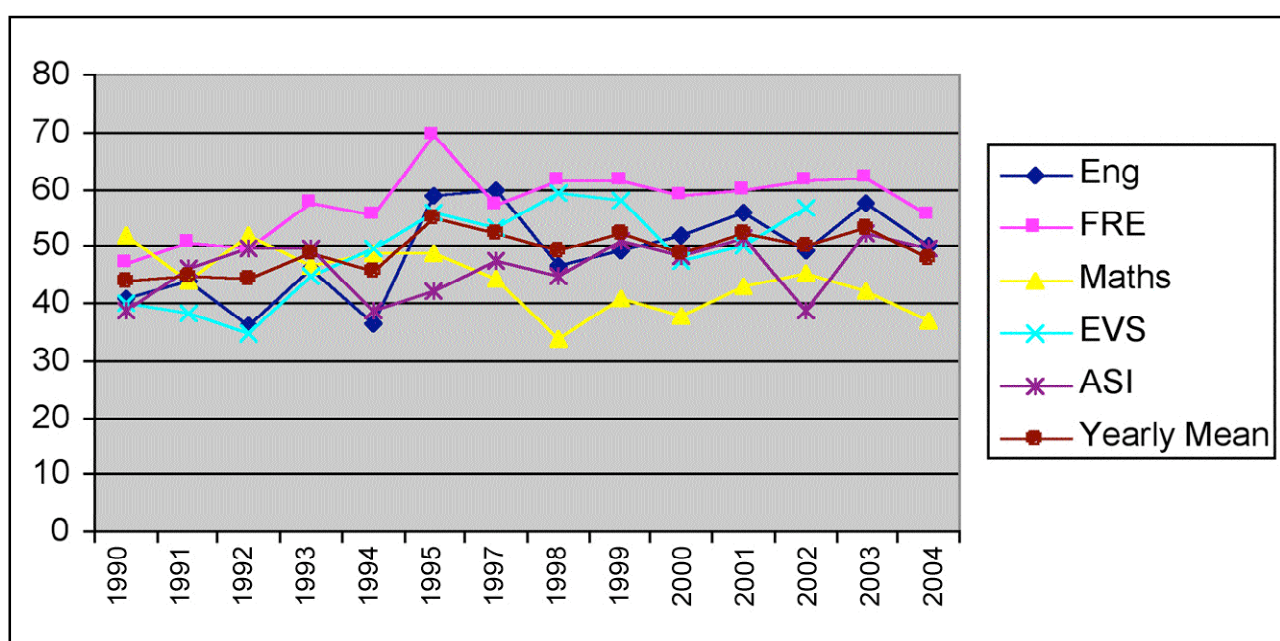
2.7.8 Analysis by Grades Distribution among Passes

Distribution among passes seeks to uncover the statistical patterns within the category of those who have cleared the exams. It will enable us to zoom in on specific subjects and compare the quality of the results in terms of grades contrary to the absolute quantitative dimension of pass/ fail analysis.

2.7.9 Grade comparison by Subject

Grade A&B

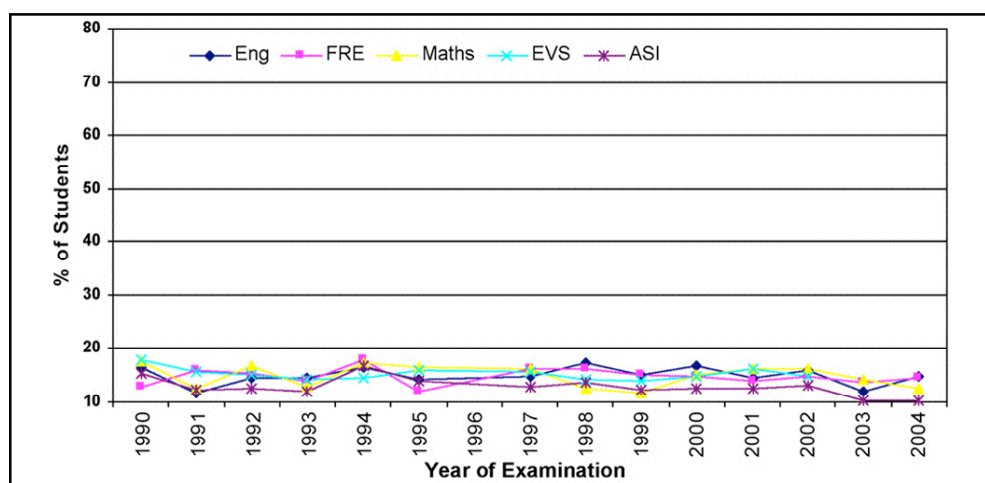
YEAR	Eng	Fre	Maths	EVS	ASI	Yearly Mean
1990	40.9	47.2	52.0	40.2	38.6	43.8
1991	44.1	50.7	44.1	38.4	46.0	44.7
1992	36.1	49.5	52.0	34.8	49.7	44.4
1993	46.0	57.4	46.7	44.7	49.5	48.9
1994	36.4	55.4	48.8	49.7	38.5	45.8
1995	59.1	69.5	48.7	55.7	42.3	55.1
1996						
1997	59.7	57.0	44.3	53.0	47.3	52.3
1998	46.6	61.7	33.9	59.2	45.0	49.3
1999	49.2	61.5	40.9	58.2	50.8	52.1
2000	51.8	58.9	37.9	47.5	48.3	48.9
2001	55.8	60.0	43.1	50.2	51.5	52.1
2002	49.3	61.7	45.2	56.6	38.8	50.3
2003	57.4	61.9	42.3	-	52.1	53.4
2004	49.9	55.3	36.9	-	49.6	47.9
Mean	48.7	57.7	44.1	49.0	46.3	
Std	7.7	5.9	5.4	8.1	4.9	



The highest percentage for the combined A and B grades is observed for French, as compared to English at 59.7%. The peak for Mathematics is only at 52% registered in the early 1990s and it experience a decline thereafter whereas the peak for Asian languages is also at 52% in 2003. Percentage grades in the higher score brackets in Maths and Asian Languages have been below the yearly mean almost throughout the period. Could it possibly be the case that that unlike language papers, Mathematics requires both linguistic skills and, additionally, mathematical skills which makes it more difficult to score top grades? Additionally, if all language papers follow a more or less set format, why is Asian languages and Arabic lagging behind the core languages? Is a matter of only time tabling provisions which allocates less time for these languages or is it a matter of exposure to the languages? Percentages on A and B in these languages seemed to have increased in 2003 and 2004, one year after Asian languages were to be integrated into the grading system. Performance across all subjects seemed to have experience an improvement in 1995 but this change has not been sustained.

Grade C

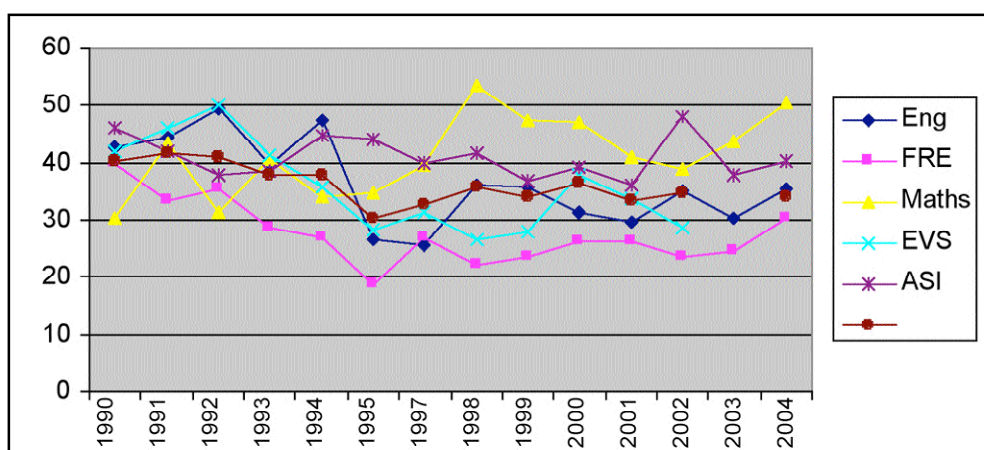
YEAR	Eng	Fre	Maths	EVS	ASI	Yearly Mean
1990	16.5	12.9	17.5	17.9	15.3	16.0
1991	11.6	15.9	12.6	15.7	12.1	13.6
1992	14.5	15.2	16.7	15.0	12.6	14.8
1993	14.5	13.8	12.9	14.1	12.0	13.5
1994	16.3	17.8	17.2	14.4	16.8	16.5
1995	14.3	11.9	16.5	15.9	13.9	14.5
1996						
1997	14.7	16.1	16.0	15.5	12.9	15.0
1998	17.4	16.3	12.5	14.2	13.5	14.8
1999	15.0	15.1	11.6	13.9	12.3	13.6
2000	16.7	14.7	15.1	14.8	12.4	14.7
2001	14.6	13.8	16.0	16.1	12.5	14.6
2002	15.8	14.8	16.1	14.8	13.1	14.9
2003	12.0	13.7	14.1	-	10.2	12.5
2004	14.7	14.4	12.5	-	10.3	13.0



One of the particular features of the data set produced is the remarkable stability and similarity with regard to the C grade across subject and across years. The range of C grade is located between 11.6% and 17.9% across the five subjects examined. The above graphical representation clearly reveals the cluster of data around the average. The data seem to support the hypothesis that the CPE examinations results undergo a process of standardization. The issue at hand here is not only that the questions papers are set in a more or less standard way and reproduce similar trends over the years. If such is the case, then, national examinations are not a real constant measuring rod putting to test the competencies and skills acquired by children after 6 years of schooling. The concept of ELC and DLC clearly illustrates our desire as a nation to go for a competency based evaluation system but the repetitive pattern would preclude this very idea because the CPE has become a means of classifying students along a scale rather than, providing a real assessment of competencies.

Grade D&E

YEAR	Eng	Fre	Maths	EVS	ASI	Yearly Mean
1990	42.6	39.9	30.5	41.9	46.1	40.2
1991	44.3	33.4	43.3	45.9	41.8	41.7
1992	49.4	35.3	31.3	50.2	37.7	40.8
1993	39.6	28.8	40.5	41.2	38.5	37.7
1994	47.3	26.8	34	35.9	44.7	37.7
1995	26.6	18.7	34.8	28.4	43.9	30.5
1997	25.6	26.9	39.7	31.5	39.8	32.7
1998	36	22.1	53.6	26.6	41.5	36.0
1999	35.7	23.4	47.4	28	36.8	34.3
2000	31.5	26.4	46.9	37.7	39.3	36.4
2001	29.6	26.2	40.8	33.7	36	33.3
2002	35	23.6	38.8	28.6	48.1	34.8
2003	30.5	24.4	43.6	-	37.7	-
2004	35.4	30.3	50.6	-	40.2	34.1
Period Mean	36.4	27.6	41.1	35.8	40.9	
Std	7.4	5.6	7.0	7.7	3.7	



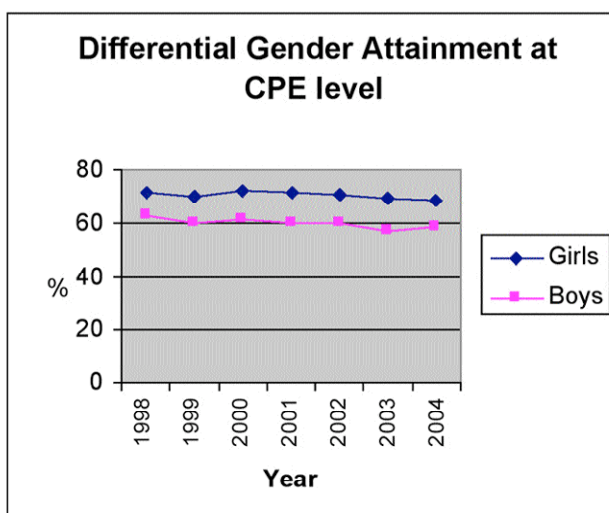
The official document of the MES regarding the grading system and the corresponding marks as from 1994, the following is noted:

Grade	Marks
A	70 and above
B	60 and above but less than 70
C	50 and above but less than 60
D	40 and above but less than 50
E	30 and above but less than 40
F	Below 30

Given the distribution of the paper in terms of ELC and DLC, a “D” grade signifies at best that a student has earned less than 50%, it is therefore clear that 55% of those taking part at the CPE level would not have developed the necessary essential skills in Mathematics.

2.8 Analysis by Sex

Gender performance differential is an important aspect of research on educational achievement as it can bring significant insight in the process of education and the imbalances and discriminatory practices, if any, that could result in the performance patterns that have been produced during the past 14 years.



The graphs reveal a significant gender gap in favour of girls. The difference is substantial around 10% higher for girls and sustained over the whole period under study and even beyond. Though there are variations in achievement within particular subject categories, it does appear that male lower attainment has been registered throughout the period and at SC and HSC level too. A pertinent issue which has been highlighted every now and again is the contrasting employment picture which seems to be paradoxical to girls' better attainment.

2.8.1 English Language

YEAR	Grade A & B		Grade C		Grade D & E		Male Underachievement		
	Boy	Girl	Boy	Girl	Boy	Girl	A & B	C	D & E
1990	40.4	41.4	16.5	16.5	43.1	42.1	-1.4	0.0	1.0
1991	44.2	44.0	11.8	11.4	44.0	44.6	0.2	0.4	-0.6
1992	35.6	36.7	15.0	14.0	49.4	49.4	-1.1	1.0	0.0
1993	45.0	46.9	14.8	14.1	40.2	39.0	-1.9	0.7	1.3
1994	35.2	37.6	16.8	15.9	48.0	46.5	-2.4	0.9	1.5
1995	59.0	59.1	14.3	14.2	26.6	26.6	-0.1	0.1	0.0
1997	56.9	62.3	15.4	14.1	27.7	23.6	-5.3	1.3	4.1
1998	44.1	48.9	17.0	17.7	38.9	33.4	-4.8	-0.7	5.5
1999	47.7	50.6	14.2	15.8	38.1	33.6	-2.9	-1.5	4.4
2000	49.4	54.0	17.0	16.4	33.6	29.6	-4.6	0.6	4.0
2001	51.	59.6	15.3	13.9	33.0	26.5	-7.9	1.4	6.5
2002	46.17	52.2	16.2	15.4	37.7	32.4	-6.1	0.8	5.3
2003	52.5	61.9	12.7	11.5	34.9	26.6	-9.5	1.2	8.3
2004	46.2	53.3	15.0	14.4	38.8	32.3	-7.1	0.7	6.5

2.8.2 French Language

YEAR	Grade A & B		Grade C		Grade D & E		Male Underachievement		
	Boy	Girl	Boy	Girl	Boy	Girl	A & B	C	D & E
1990	46.0	48.4	13.1	12.7	40.9	38.9	-2.4	0.4	1.9
1991	48.7	52.6	16.2	15.6	35.2	31.8	-4.0	0.6	3.4
1992	46.7	52.1	15.7	14.7	37.6	33.2	-5.4	1.0	4.4
1993	54.6	59.9	14.6	13.0	30.8	27.1	-5.3	1.6	3.7
1994	52.9	57.6	18.0	17.7	29.1	24.7	-4.8	0.3	4.4
1995	67.4	71.4	12.0	11.7	20.6	16.9	-4.0	0.3	3.7
1997	53.7	60.2	16.6	15.6	29.7	24.2	-6.5	1.0	5.6
1998	56.8	66.1	17.1	15.5	26.1	18.4	-9.3	1.6	7.7
1999	57.4	65.2	16.1	14.1	26.5	20.7	-7.8	2.0	5.8
2000	55.4	62.0	14.7	14.8	29.8	23.2	-6.6	0.0	6.6
2001	55.9	63.8	14.8	13.0	29.3	23.3	-7.9	1.8	6.1
2002	57.5	65.6	15.6	13.9	26.9	20.4	-8.1	1.7	6.4
2003	57.9	65.7	14.7	12.8	27.4	21.5	-7.9	1.9	6.0
2004	51.9	58.3	14.8	14.1	33.3	27.6	-6.4	0.7	5.7

Male underachievement in language has been highlighted by the data and reflects the trends in countries like the UK³ and the US⁴. Indeed, unlike the experience of other countries where the situation evolved over 2 decades from female underachievement to male underachievement, in Mauritius it does seem that there has been a female bias in achievement in terms of overall percentages passes or fail but it is only in the 1990s that qualitative analysis of data were carried out (Bunwaree: 1994) and continued female underachievement in a number of subject areas highlighted. However, girls' lead in languages is not a recent phenomena nor can it be attributed to any explicit gender policy to close the gap. The statistics reveal that the gap is increasing in both English and French and, more so in the latter.

2.8.3 Mathematics

YEAR	Grade A & B		Grade C		Grade D & E		Female Underachievement		
	Boy	Girl	Boy	Girl	Boy	Girl	A & B	C	D & E
1990	52.1	51.9	17.1	18.0	30.8	30.1	-0.2	0.9	-0.7
1991	45.1	43.2	12.3	12.9	42.6	43.9	-1.9	0.6	1.3
1992	52.7	51.3	16.4	17.0	30.9	31.7	-1.4	0.7	0.7
1993	47.4	46.0	12.2	13.5	40.4	40.5	-1.4	1.3	0.1
1994	49.7	48.0	17.5	16.9	32.9	35.1	-1.6	-0.6	2.2
1995	50.7	46.8	16.4	16.6	32.8	36.7	-4.0	0.1	3.9
1997	44.6	44.1	15.5	16.5	39.9	39.4	-0.5	1.0	-0.6
1998	34.1	33.7	11.7	13.3	54.3	53.0	-0.3	1.6	-1.3
1999	41.5	40.4	11.4	11.9	47.1	47.7	-1.1	0.5	0.6
2000	38.6	37.3	14.7	15.6	46.7	47.1	-1.2	0.9	0.4
2001	42.6	43.6	15.7	16.4	41.7	40.0	1.0	0.8	-1.8
2002	44.7	45.6	15.6	16.6	39.7	37.8	0.9	1.0	-1.9
2003	41.1	43.4	14.2	14.1	44.6	42.5	2.3	-0.1	-2.2
2004	37.1	36.7	11.9	13.0	50.9	50.3	-0.4	1.1	-0.7

³ Younger, M. and Warrington, M. 2005 *Raising Boys' Achievement in Secondary Schools: Issues, Dilemmas and Opportunities*, Maidenhead: Open University Press.

⁴ Educational Testing Service, *Differences in the Gender Gap: Comparisons Across Racial/Ethnic Groups in Education and Work*, Princeton, New Jersey, 2001

2.8.4 EVS

YEAR	Grade A & B		Grade C		Grade D & E		Female Underachievement		
	Boy	Girl	Boy	Girl	Boy	Girl	A & B	C	D & E
1990	42.8	37.5	17.7	18.1	39.6	44.4	-5.3	0.5	4.8
1991	40.3	36.3	15.9	15.5	43.8	48.2	-3.9	-0.4	4.4
1992	37.0	32.6	15.2	14.8	47.8	52.6	-4.4	-0.4	4.8
1993	47.3	42.0	14.3	13.8	38.4	44.2	-5.2	-0.5	5.7
1994	52.7	46.8	14.2	14.6	33.1	38.7	-6.0	0.4	5.6
1995	59.0	52.4	15.1	16.7	25.9	30.9	-6.6	1.6	5.0
1997	54.5	51.4	14.9	16.1	30.5	32.5	-3.2	1.2	2.0
1998	60.7	57.7	13.7	14.8	25.6	27.5	-3.0	1.1	1.9
1999	59.3	57.1	13.3	14.4	27.4	28.5	-2.2	1.0	1.1
2000	49.4	45.7	14.5	15.1	36.1	39.2	-3.6	0.6	3.1
2001	51.8	48.6	15.5	16.7	32.7	34.7	-3.2	1.3	1.9
2002	57.5	55.6	15.0	14.7	27.5	29.7	-1.9	-0.3	2.2
2003									
2004									

2.8.5 Asian Languages

YEAR	Grade A & B		Grade C		Grade D & E		Male Underachievement		
	Boy	Girl	Boy	Girl	Boy	Girl	A & B	C	D & E
1990	32.4	43.4	14.6	15.8	53.0	40.8	-11.0	-1.2	12.2
1991	39.1	51.3	11.9	12.3	48.9	36.4	-12.2	-0.4	12.5
1992	42.2	55.3	14.1	11.5	43.7	33.2	-13.1	2.6	10.5
1993	41.7	55.4	12.5	11.6	45.8	32.9	-13.7	0.9	12.8
1994	30.2	44.4	17.7	16.2	52.1	39.5	-14.1	1.5	12.6
1995	34.8	47.4	13.3	14.3	51.9	38.3	-12.5	-1.0	13.6
1997	39.5	52.7	13.4	12.5	47.1	34.8	-13.2	0.8	12.3
1998	37.8	50.0	13.5	13.5	48.7	36.6	-12.2	0.1	12.1
1999	43.1	56.2	13.6	11.4	43.3	32.4	-13.1	2.2	10.9
2000	41.0	53.3	12.9	12.1	46.2	34.6	-12.3	0.8	11.5
2001	42.8	57.2	13.3	11.9	43.9	30.9	-14.4	1.4	13.0
2002	29.9	45.1	13.0	13.2	57.1	41.8	-15.2	-0.2	15.4
2003	43.6	57.7	10.3	10.1	46.0	32.1	-14.1	0.2	13.9
2004	41.6	54.9	11.2	9.7	47.3	35.4	-13.3	1.5	11.8

Performance differential in Asian Languages is even more conspicuous with the performance at the upper ends being higher for girls by above 10% points.

Conversely, in Mathematics and EVS, boys outperformed girls although the difference is less marked and sustained as for languages. Over the period 2001-2003, girls' performance in Maths was slightly better than boys and this improvement is also sustained in the lower brackets. Differential achievement is however more pronounced in EVS with boys doing better than girls by 3%point points in the upper grade brackets. Research in a number of countries highlight that girls develop early literacy skills and the gap is apparent throughout primary and secondary schooling (Rudduck et al: 2000). The gender statistics at the level of CPE goes in line with the beliefs of common folk psychology as pertains to girls' predisposition for language. Yet two qualifications need to be made here:

- (i) the Boys-girls gap is always smaller magnitude than the Girls-boys gap
- (ii) the Boys-girls gap is closing in

The literature on gender differential achievement in childhood centers around two schools of thought. The first (Rudduck et al: 2000) considers the socialization process as the key to explaining acquisition of language skills. It is posited that differential gender socialization process predisposes girls to develop more effective language skills. The nature of mother-daughter relationship encourages the development of communicative skills and make girls more receptive to learning. The second looks at the outcome of gendered identities as determined by school processes and our understanding of concepts of masculinity (Ridell: 1992).

It is also important to keep in mind that gender as a variable explaining achievement, interacts with other aspects of social being such as class, culture and ethnicity (Archer and Yamashita, 2003). There is a need to confirm and compare the trends in Language and Maths and Science at SC and HSC levels to confirm them. Though the available data only highlight the differential gender patterns in terms of achievement, this analysis can only reveal the statistical and empirical aspects of the phenomena while raising issues worth investigating.

2.9 Geographical Distribution

Schools have been differentiated in terms of geographical location. Four different types of schools have been identified as follows: rural, urban, coastal and sub-urban. The rationale for comparing performance along geographical locations in the Mauritian contexts can be justified on two counts. Firstly, there is a two way relationship between the school clientèle and the achievement trends produced. On the one hand, the school clientèle in terms of students' initial abilities and socio- economic factors determine the educational achievement and on the other hand, the achievement pattern of the school determines the school clientèle. Secondly, achievement patterns thus revealed can indicate the focus for targeted interaction for those regions which may highlight specificities of educational achievement patterns.

2.9.1 Distribution of Students by Geographical location

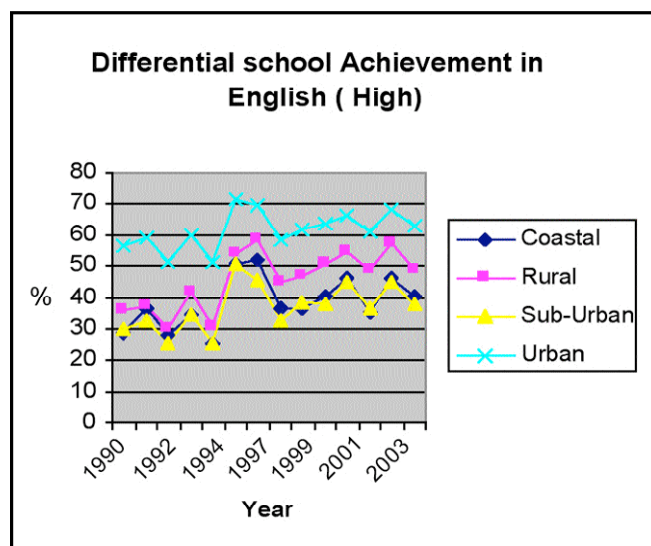
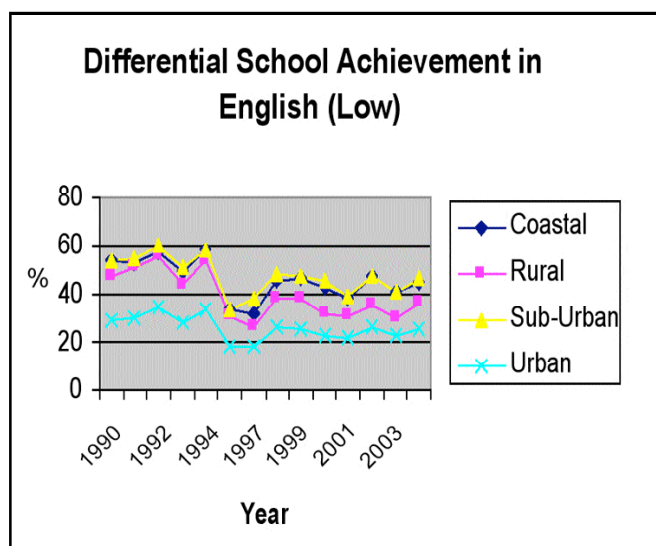
YEAR	Coastal	Rural	Sub-Urban	Urban	Total
1990	7.9	49.9	12.5	29.7	100
1991	8.1	48.8	13.1	30.0	100
1992	7.6	48.9	13.7	29.8	100
1993	7.7	48.7	14.0	29.7	100
1994	8.3	47.3	14.5	30.0	100
1995	8.4	47.0	15.4	29.2	100
1997	8.5	46.1	15.0	30.4	100
1998	8.4	45.3	15.8	30.5	100
1999	8.4	45.7	15.3	30.6	100
2000	8.8	46.4	15.0	29.7	100
2001	9.1	46.3	15.0	29.6	100
2002	8.8	46.0	15.5	29.6	100
2003	9.1	46.8	15.6	28.5	100
2004	9.1	47.9	15.9	27.1	100
Average	8.4	47.3	14.7	29.6	100

Among the categories established, the large majority of primary students taking part in CPE exams come from schools situated in rural regions (around 47 %) while a significant proportion also comes from “urban” schools. However, this data has to be carefully interpreted because students in urban schools come possibly be residing in “non urban” areas. Though it is a matter of government policy for schools to enrol students only in their “residential” areas, it is also equally true that because of the existence of so-called star schools, students coming from other areas could also be enrolled in urban schools. One interesting statistics concerns the sub-urban schools which accounts for 30% of the school population (on average). Given that a large number of those schools have pass rates which are below the national average, it suggests that 30% of our school going population have less only 50% chance of clearing their CPE examinations.

2.9.2 English Language

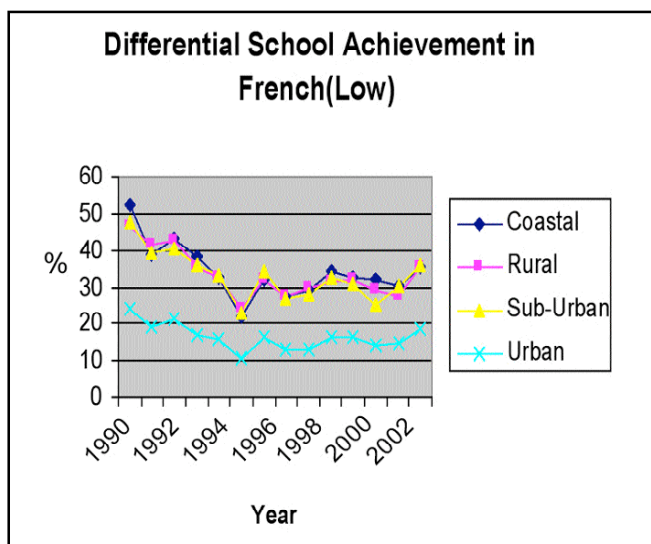
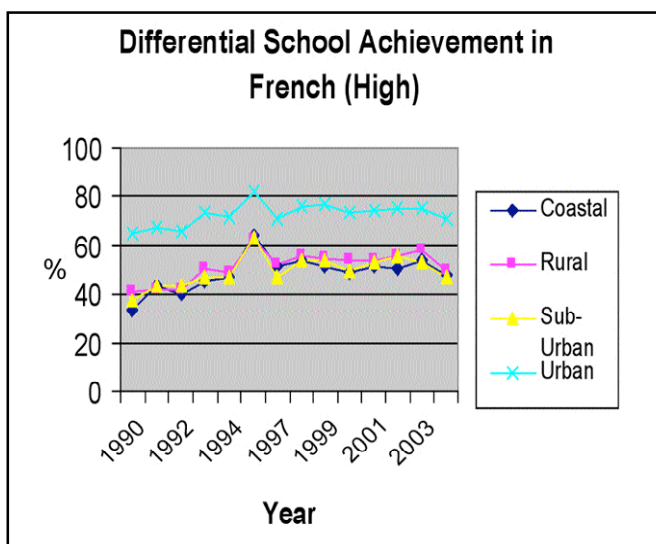
Schools that are considered to be “Star schools” are almost all located in the urban regions and the trend which is observed here in the case of English language is similar across all subjects - urban schools have a clear lead – except for Asian languages. The profiles of coastal and suburban schools are similar, that is, on average, 45% of students who manage to clear their CPE examinations score either an “E” or a “D” in English language. For schools located in rural areas, performance in English is generally better than performance in French although the reverse trend is observed for both sub-urban and coastal schools.

A number of hypothetical explanations can support the patterns observed. Some can be grounded in the socio-economic approach to explaining differential educational achievement and others could possibly relate to the domain of socio-linguistics. However, statistical data on their own only point out to the pattern and not to the cause and effect relationship.



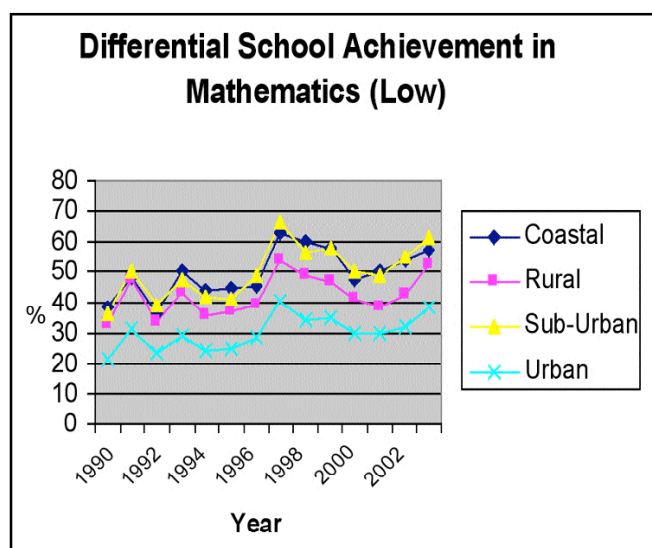
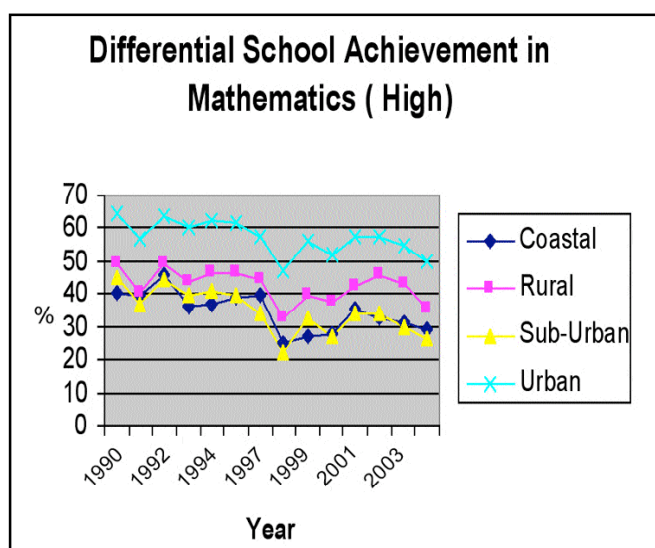
2.9.3 French Language

Students' performance in French is the highest across all subjects at the primary level in all school types. It is also worth mentioning that the differential achievement across categories of schools for French is smallest for the upper brackets. One interesting observation relates to the better achievement of rural schools as compared to suburban schools. More than 50% of students who clear their CPE French papers obtain either A or B irrespective of the school type.



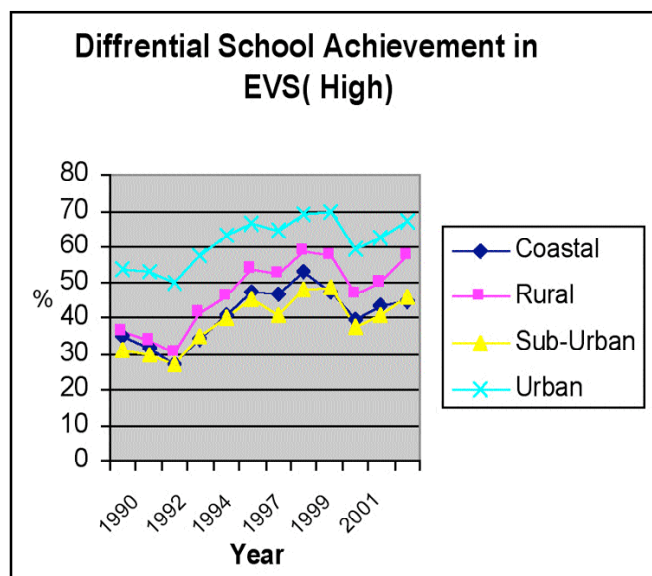
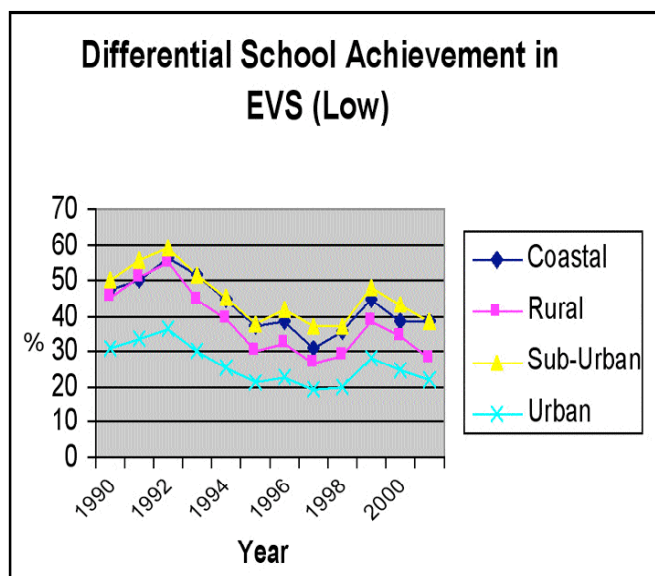
A clear downward trend emerges across all school types especially for those scoring either A or B in Mathematics. Over the 14 year period the % among passes scoring either A or B have plummeted from 40 to 28% for the coastal schools and 64 to 49% in urban schools reflecting the downward general trend from best to lowest achieving schools. Additionally, the discrepancy between urban and suburban and coastal schools have increased in the past few years with the % of students scoring D and E increasing in the last two mentioned categories.

2.9.4 Mathematics



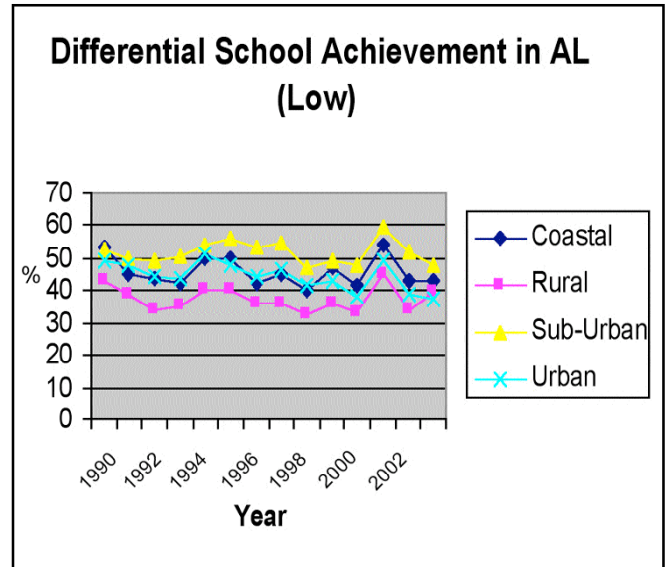
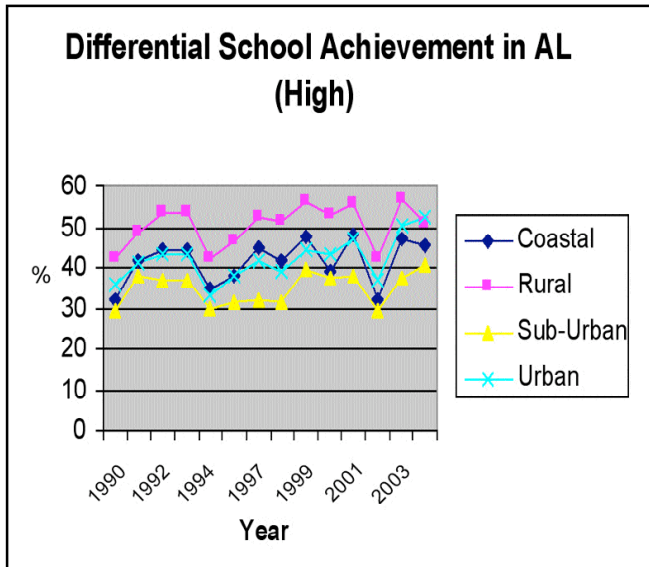
2.9.5 EVS

Similarly to French subject, the data reveals that there is a narrower gap between the rural and suburban and coastal for A and B grades EVS. Unlike other subjects there has been an improvement over the 14 year period although yearly fluctuations were registered in either direction. The comparatively better performance of students in the subject could plausibly be attributable to a number of factors ranging from the nature of the subject itself, and the possibility for more interactive pedagogy and concrete real life situations. Testing these diverse hypotheses is however beyond the scope and objectives of this research.



2.9.5 Asian Language

The performance of rural schools in the higher achievement brackets is consistently better than urban schools except for 2004. Among the students who clear their oriental language paper, an average of 40% score either A or B. This is a comparatively high figure which has to be carefully interpreted in the context of Asian language being an optional subject. It could possibly be argued that because it is optional only those who have either an interest or ability will take the exams. The patterns between rural and urban schools are similar in the same way the profiles of coastal and sub-urban are closely replicated.



2.10 Failure Distribution by Subject over Years

2.10.1 Average % level achieved over 14 years across subjects (except for History, Geography / Science)

	A	B	C	D	E	F&U	X
English	21.1	11.4	10.0	10.5	13.7	29.2	4.0
French	28.5	12.4	10.4	9.7	9.6	25.3	4.0
Mathematics	21.1	9.9	10.4	12.7	16.2	25.8	4.0
EVS	22.7	10.8	10.4	11.1	13.2	27.5	4.3
History & Geography	24.3	14.9	9.7	9.9	11.7	27.2	2.4
Science	32.3	15.6	8.3	8.3	8.8	24.2	2.4
Asian Language	20.5	9.2	8.2	10.4	15.9	30.7	5.2

2.10.2 Maximum % level achieved over 14 years across subjects

	A	B	C	D	E	F&U	X
English	29.2	17.3	11.9	13.8	20.0	32.1	5.1
French	40.8	19.6	13.0	11.1	16.2	29.2	5.1
Mathematics	26.6	14.6	12.7	16.0	22.1	28.1	5.1
EVS	29.2	16.3	12.0	13.4	21.3	29.3	5.1
History & Geography	25.5	16.0	10.9	11.2	12.3	30.6	2.6
Science	32.8	15.9	8.5	8.7	9.3	25.7	2.7
Asian Language	26.4	12.0	10.6	12.1	19.3	33.9	8.0

2.10.3 Minimum % level achieved over 14 years across subjects

	A	B	C	D	E	F&U	X
English	14.5	8.4	7.6	7.4	8.4	26.0	2.1
French	21.8	8.4	8.6	7.2	6.6	19.9	2.1
Mathematics	15.5	6.7	8.1	10.5	10.2	22.2	2.1
EVS	15.7	8.4	9.4	9.3	8.8	23.1	3.0
History & Geography	23.1	13.8	8.5	8.6	11.0	23.8	2.1
Science	31.8	15.3	8.1	8.0	8.4	22.7	2.1
Asian Language	13.4	7.1	6.5	8.8	14.4	27.6	0.0

2.10.4 Variation in % achievement levels over 14 years across subjects

	A	B	C	D	E	F&U	X
English	4.9	2.8	1.2	1.7	3.4	1.7	0.9
French	5.1	3.1	1.3	1.0	2.5	3.3	0.9
Mathematics	3.5	2.4	1.5	1.6	4.0	1.5	0.9
EVS	4.8	2.1	0.9	1.5	3.8	1.8	0.6
History & Geography	1.7	1.5	1.7	1.8	0.9	4.8	0.4
Science	0.7	0.4	0.3	0.5	0.6	2.1	0.4
Asian Language	3.7	1.2	1.1	1.2	1.4	1.5	2.0

The data reveals that on average, 53% earn a maximum “D” in English, 45% in French, 54% in Maths, 52% in EVS and 57% in Asian languages. The official document from the MES (1994) clearly describes the lay out of the question papers at CPE level.

“Section A is addressed to the whole ability range and will assess the Essential Learning Competencies (ELC) which all children should have mastered at the end of primary schooling. The question set in this section will test mostly knowledge, understanding and simple problem solving, and will carry 60 marks.”

Given the above clarifications, and the grading system presented in section 2.7.9, a “D” grade is equivalent to 50% and the data points very strongly to the hypothesis that approximately 50% candidates have clearly not mastered the essential learning competencies. This hypothesis is further supported by the common sense understanding that children who have clearly not mastered lower order thinking skills required to clear section A, will not be more successful in Section B.

The disarming issue here relates to the fact that it is impossible within a context of automatic promotion and the lack of comparable data across schools, to gauge exactly the extent to which learning competencies (which are graded and spanned across the six years of primary schooling) have been developed. The only comparable data becomes available after 6 years of schooling and the assessment that it provides on the situation in our schools can only be incomplete. However, the above statistics, together with the reports of examiners seem to gesture towards a disheartening picture of achievement. It is strongly suspected that the absence or lack of emphasis laid on remedial teaching in mixed ability classes, repeatedly highlighted in many examiners’ reports across all subjects, may explain these statistics.

Chapter 3

Results for the School Certificate

3.1 Background

The School Certificate (SC) marks the end of 11 years of formal schooling and the examinations test both the content and specific competencies related to distinct disciplines against the standards set for an “O” level. The School Certificate is an international recognition of attainment of “O” levels and the examinations are organized by the Mauritius Examinations Syndicate although the University of Cambridge prepares the questionnaires and is responsible for the marking of scripts in most subject areas.

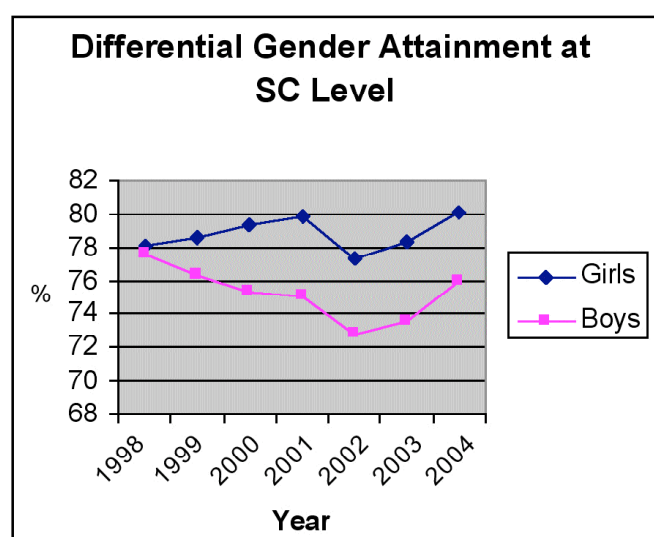
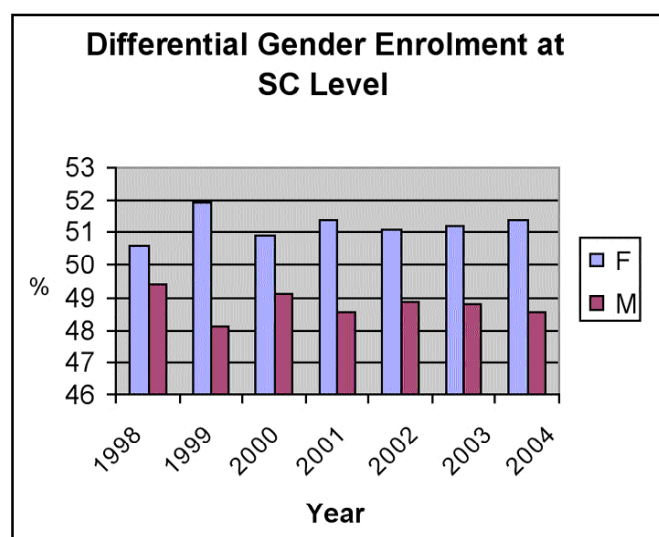
The number of candidates taking part in these examinations has remained more or less constant over the seven year period of study, with a deviation of 200-900 across the years.

Given the stability in population growth and the fact that education has been made compulsory till the age of 16, the trend in terms of number of candidates is expected to continue or even increase.

Total Population (no) of School Certificate Examinees							
	1998	1999	2000	2001	2002	2003	2004
Total	19318	19310	18823	18438	18529	18692	18839

The data on the following page shows a more or less balanced distribution genderwise although more girls have been taking part in the exams compared to boys. This is indeed an intriguing revelation. Two alternative explanations can be offered. Either girls’ better performance at CPE in more than three subjects namely the languages make them more eligible for admission in secondary schools. Or, if we assume more or less similar entrance distribution, it must signify that boys attrition is greater.

Differential Gender Enrolment and Attainment



	1998		1999		2000		2001		2002		2003		2004	
SUBJECT	G	B	G	B	G	B	G	B	G	B	G	B	G	B
English Language	49.1	50.9	50.8	49.2	50.0	50.0	51.0	49.0	50.6	49.4	50.4	49.6	51.0	49.0
English Language	58.2	41.8	57.2	42.8	56.1	43.9	53.3	46.7	54.3	45.7	56.3	43.7	54.0	46.0
Literat. in English	75.7	24.3	74.2	25.8	74.0	26.0	74.6	25.4	75.5	24.5	76.2	23.8	74.0	26.0
French Literature	68.4	31.6	71.1	28.9	68.4	31.6	67.1	32.9	66.5	33.5	64.7	35.3	67.1	32.9
Hinduism	64.9	35.1	65.0	35.0	68.5	31.5	70.9	29.1	74.1	25.9	73.2	26.8	71.1	28.9
Economics	50.5	49.5	51.5	48.5	51.0	49.0	53.3	46.7	53.5	46.5	53.3	46.7	52.9	47.1
French	50.7	49.3	51.9	48.1	51.0	49.0	51.4	48.6	51.1	48.9	51.1	48.9	51.4	48.6
Mathematics (A)	72.7	27.3	50.9	49.1	51.7	48.3	50.7	49.3	55.9	44.1	57.2	42.8	55.6	44.4
Mathematics D	49.7	50.3	52.0	48.0	51.0	49.0	51.5	48.5	50.5	49.5	50.3	49.7	50.6	49.4
Add Maths	45.0	55.0	46.1	53.9	45.0	55.0	45.8	54.2	46.0	54.0	46.4	53.6	46.6	53.4
Physics	27.4	72.6	28.6	71.4	28.2	71.8	27.6	72.4	28.6	71.4	28.4	71.6	28.0	72.0
Chemistry	39.2	60.8	43.6	56.4	43.1	56.9	44.0	56.0	44.0	56.0	43.7	56.3	44.4	55.6
Biology	-	-	49.1	50.9	49.5	50.5	50.4	49.6	50.9	49.1	51.8	48.2	52.0	48.0
Art	-	-	51.6	48.4	50.1	49.9	49.0	51.0	49.0	51.0	47.5	52.5	46.6	53.4
Computer Studies	-	-	43.0	57.0	40.6	59.4	42.0	58.0	44.0	56.0	46.8	53.2	45.7	54.3
Commerce	-	-	46.9	53.1	45.0	55.0	45.7	54.3	44.8	55.2	43.8	56.2	47.5	52.5
Principles of														
Accounts	-	-	57.9	42.1	57.0	43.0	57.9	42.1	57.4	42.6	57.4	42.6	58.3	41.7
Business Studies	-	-	54.6	45.4	54.8	45.2	55.8	44.2	52.4	47.6	54.1	45.9	54.3	45.7

The Key

Subjects with a higher Male % by at least 10% points on average over 7 years

Subjects with a higher female % by at least 10% points on average over 7 years

There does appear to be an increasingly significant and growing gender differential at both the enrolment and the attainment level. However, the gender differential at SC level is of around 4% as compared to the 10% registered at CPE level. Boys do seem to be catching at SC although there does appear to be a tendency for the gap to increase again at HSC level. This trend seems to follow the examples of a number of countries where girls are performing better than boys in diverse disciplines. Girls' attainment seems to have overtaken boys in a number of countries like the UK, New Zealand, Australia, Scotland, Singapore and Latvia. However, the significant difference here is that girls were since the early 1990s displaying higher attainment than boys. While the attainment of boys tended to fluctuate, girls' attainment was relatively more stable. Since 2003, however, both have picked up although girls' progress has been more substantial.

For English syllabus 1125 is taken by the majority of students and syllabus 1125 b is an alternative for weaker candidates. For the former the distribution is more or less across gender reflecting the gender distribution of candidates. For 1125 b the distribution of low achievers in English is not necessarily balanced. For Mathematics Syllabus D is the most common choice reflecting a more or less balanced distribution.

3.2 Percentage of Boys & Girls sitting for exams in main stream subjects

3.2.1 Choice of Subject on a Gender Basis

There is an observable and sustained gender difference in terms of subject chosen at SC level. For subjects like English literature, French literature and Hinduism, there is a difference of 20% points in favour of girls, almost uninterruptedly during the period under study. Male bias is prevalent mostly in Physics while in Chemistry there is an improving trend in favour of girls. There is also a slight indication that for Art the trend is moving towards more boys selecting the subject while the reverse is observed for Biology. The table gives a highlight regarding subject stereotyping at SC level:

Subjects with continuing Male Bias	Subjects with continuing Female Bias	Subjects with indication of trend reversal
Physics	Literature in English	Biology (male to female)
Chemistry	Literature in French	Art (female to male)
Computer Studies	Hinduism	

The motivation for students' choice of subjects range from thoughtful career choice, perceived level of difficulty of the subject and probably an in-built gender bias that some subjects are meant for one sex rather than the other. There is little empirical research on the factors influencing the choice of subjects by students at the level of form III. However, the data points to clear gender stereotyping where some subjects are concerned. Data available prior to 1998 (Bunwaree 1994) also reveal that such trends are continuing phenomena in our educational landscape. A number of explanations have been proposed to explain such trends, but among the most recurrent ones, are those which point out to schooling processes which tend to reproduce gender discriminatory practices. As Bunwaree (1994) noted:

“Girls continue to be channelled into traditionally female subjects... student choices of fields of study, and subsequently of occupations, reproduce notions of femininity and masculinity.”

At the international level, a large section of available literature on gender stereotyping in the case of fields of study choice comment on low female uptake of Additional Mathematics, Science and the comparatively low male uptake of the Languages (Sutherland, 1999; Croxford, 2000). The trend seems to be relevant to the Mauritian context. The variables often taken into account to explain the persistence of such trends highlight, apart from career prospects, stereotyping among pupils themselves, stereotyping by parents and teachers and the wider social expectations. In the recent years, there is also a growing body of pedagogical literature which focus on how boys and girls learn in different ways. As pointed out in the one of the official publications of the government of Scotland on Gender inequalities in Scottish schools (2006)¹:

“different interests and pastimes, which provide girls and boys with different language opportunities, align them in different ways to schooling and learning. (Murphy and Elwood, 1997).”

It is also posited that some subjects may be more amenable to certain ways of learning which may suit one gender more compared to the other, thereby potentially explaining trends.

However, these statistics on subject intakes will be confronted with achievement levels of girls in the science streams. While girls outperform boys in a number of science disciplines there seems to be a persistence with regard to bias in subject uptakes. Should this be interpreted as evidence of the fact that gender socialization effect may be so strong as to offset the realization that girls generally do better than boys even in “male” dominated subjects? A second question which may arise relate to the phenomena observable in developing countries related to male underachievement. Gorard (2005), in his analysis of international data on educational attainment, show that boys in all countries fail to match girls’ achievement regardless of the way they are taught. He explains that:

“if the differences between male and females are universal, they are unlikely to be the result of culturally specific, or even pedagogic change. The differences occur in very different education systems. Any explanations for the underachievement of boys must therefore transcend all these differences.”

The question that the above comment seems to beg is whether girls achievement has increased with male achievement remaining constant, or whether both are rising but that of girls increasing at a higher rate or lastly, whether, the achievement rates are moving in opposite directions? The section on gender achievement levels in subject discipline will throw light on this issue.

However, one has to bear in mind that the real issue when it comes to underachievement is not about why girls are more successful but why boys are not achieving?

It is to be highlighted that: subjects such as Design and Technology, Food and Nutrition are not offered in girls or boys schools respectively and, as such, have not been considered. The persistence of such practices revealed systemic defaults and state level bias which need to be urgently addressed if we are serious about removing gender bias.

¹ <http://www.scotland.gov.uk/publications>

3.3 Subject Streams Per School Type

The pattern of choice of subjects at the school level is often guided by the need to select specific streams although an increasingly larger number of students have opted from a combination of two to three streams as per the subject combination possibilities offered by the different schools. However, the rigidity which often characterizes the selection of subject at form three levels and the limits imposed by the availability of staff and specialist rooms in a number of schools, compel students to often take up subjects which do not really match their ability or interest. This early specialization which has now become an accepted feature of our system contradicts a more liberal understanding of education. It may be worthwhile to reconsider this requirement in the light of compulsory education till the age of 16. Can a more broad based vision of education be envisaged till form V level?

For the purpose of analysis and given the prevalence of subject streams over the seven year under study, we have also grouped academic subjects. However, the scope of the study was restricted to mainstream subject which accounted for the largest number of candidates. The following categorization has been applied:

BUSINESS:	Economics, Accounts, Commerce, Business Studies
LANGUAGES:	English, French, Literature in English, French literature and Hindi
MATHEMATICS:	Mathematics and Additional Mathematics
SCIENCE:	Chemistry, Biology, Physics
TECHNICAL:	Food and Nutrition, Fashion and Fabrics, Design and Technology

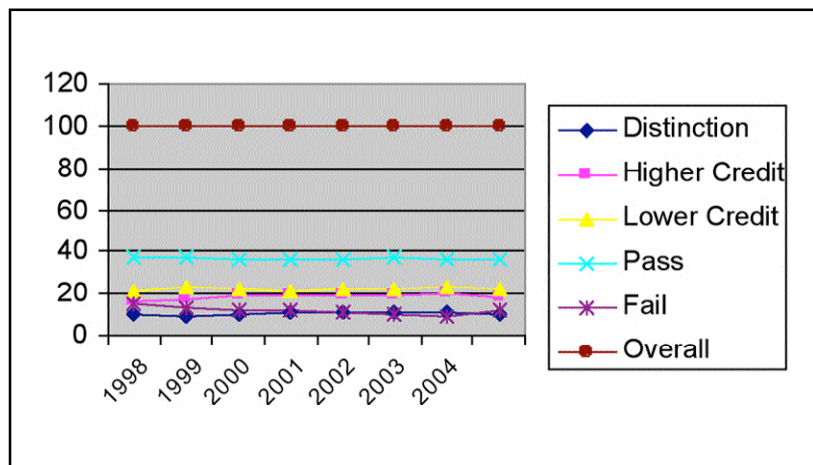
Studying the patterns of student achievement in subject streams can provide significant insight into areas/ discipline that require specific attention. Despite the fact that each subject caters to a diversity of generic competencies, it is also generally acknowledged that each discipline, or even the more widely described, subject stream also seeks to develop a specific set of skills and dispositions. As such, it is of relevance to analyse how far Mauritian students are performing over the whole spectrum of competencies which they are expected to develop over 11 years of formal schooling.

The School Certificate data has been analysed along the following lines. In the first instance, general achievement in terms of Distinction (credits 1-2), High Credit (credits 3 and 4), Lower credit (credits 5 and 6) and Pass/ Fail levels will be described, based on a stream wise categorization. For ease of interpretation and analysis, the achievement levels were grouped in five above mentioned clusters following the grading system which is based on a 1-9 scale. Additionally, the achievement clusters will enable a comparison with CPE and HSC.

Subsequently, a further set of analysis is proposed along the parameter of school type. The implicit hypothesis being tested is whether there exists a correlation between types of school and subject streams. The data could potentially uncover a “school type” effect on achievement.

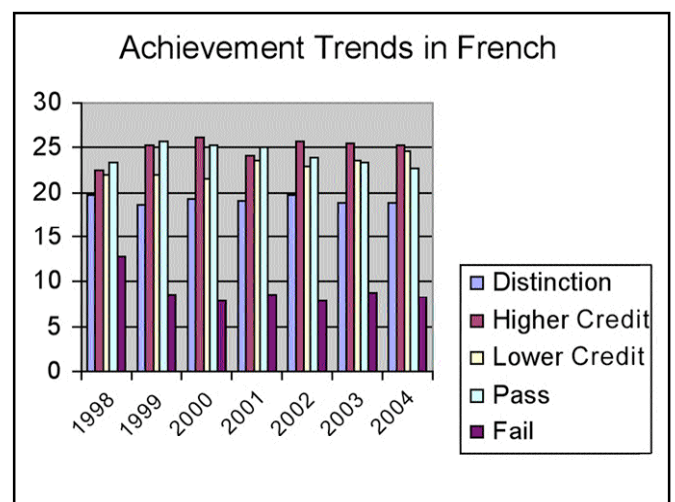
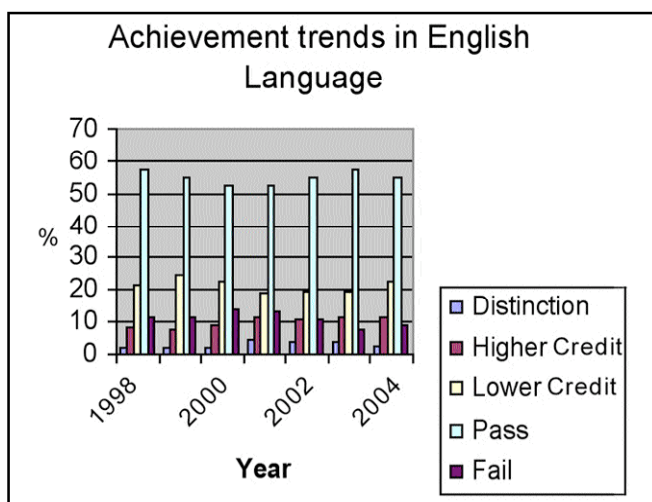
3.4 General Performance in LANGUAGES

YEAR	Distinction	Higher Credit	Lower Credit	Pass	Fail	Overall
1998	10.1	16.4	21.5	37.1	15.3	100.0
1999	9.3	17.1	22.8	37.8	13.1	100.0
2000	10.2	18.7	22.5	36.5	12.1	100.0
2001	10.7	18.7	21.5	36.4	12.6	100.0
2002	11.1	19.5	21.7	36.4	11.3	100.0
2003	10.6	19.4	22.2	37.3	10.4	100.0
2004	10.7	19.9	23.3	36.7	9.5	100.0
	10.4	18.5	22.2	36.8	12.1	100.0



Both English and French are compulsory subjects for all students taking part of the SC but all other languages are optional. The distribution is heavily skewed at the lower end with an average of 45-50% scoring a maximum of “pass” Grade and around 70% of students score not more than a lower credit of 5 and 6. There is also very little fluctuation in terms of the performance over the period. A deeper insight is obtained when the grade pattern of two compulsory core languages are analysed.

Performance Distribution in English and French



Performance in English has varied very little overall although 2001 showed a slight improvement. Consistently over the past 7 years the trend has been constant with an average of 65% of students scoring a maximum of grade 7 and an average of less than 3% scoring a distinction and less than 10 % scoring a good credit (3 and 4) for the cohort of students taking 1125 syllabus. More than 50% of each cohort of students have scored a pass grade only and around 85 % a maximum of a lower credit (5 & 6).

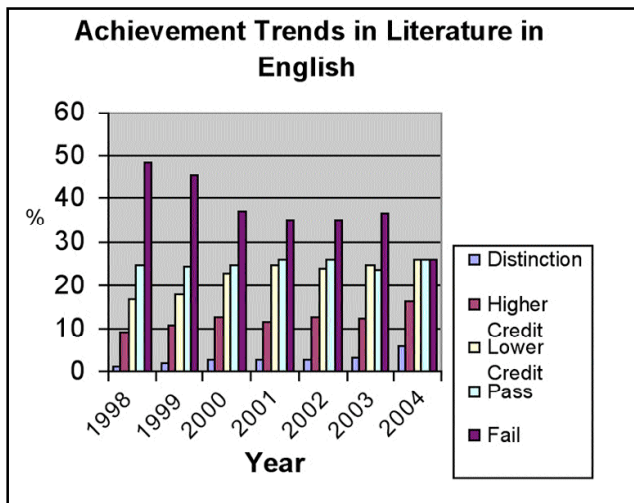
In the recent years, there has been an increasing concern with the achievement of students in English language. The overall and consistent low achievement in english should be interpreted in the light of the cultural and historical specificity of the mauritian context. English is the official language and also the official medium of instruction in the school indicating that understanding in all other languages and subject areas depends on a minimal mastery of the language. What these statistics reveal is the troubling fact that 50% of the candidates who sit for SC examinations, have not mastered English enough to earn a credit in the language despite having read the language for 11 years. It is also to be noted that the pattern is similar to the CPE trend where on average 53% of students score a maximum of D. Is it then a fair claim to state that schools do little to upgrade the entry skills of children? If only 19,000 “better” students out of the 28,000 CPE candidates proceed to take part in the SC examinations, why are they reproducing exactly the same pattern?

Whereas English displays the poorest performance overall, French in comparison reveals a brighter picture with around 19% scoring a distinction and 35 % scoring a minimum of Grade 3. The distribution of marks is less skewed compared to English with a modal grade of 6. The percentage failure for French is lowest compared to all other subjects and approximately 45 % students score a credit. The distribution among passes table also reveals that around 20% of students who clear their French paper score a grade of 3. The differential language performance is clearly visible and demands that we consider the plausible reasons. Firstly it does seem that language achievement patterns follow the ones exhibited at the CPE level. The language gap is of the order of 21.6 percentage points in the higher brackets for SC in favour of French but only of 8.4 percentage points at the CPE level². A qualification has to be made here. At SC level, contrary to CPE the status of English and French languages is different insofar as French is treated as a second language whereas English is marked as a first language. The degree of proficiency is much higher in English as revealed by the objectives set in the Cambridge syllabus. This could only be a partial explanation given French is more visible in our social and cultural environments. The language gap cannot solely be explained away by the differential status of the language at the level of marking.

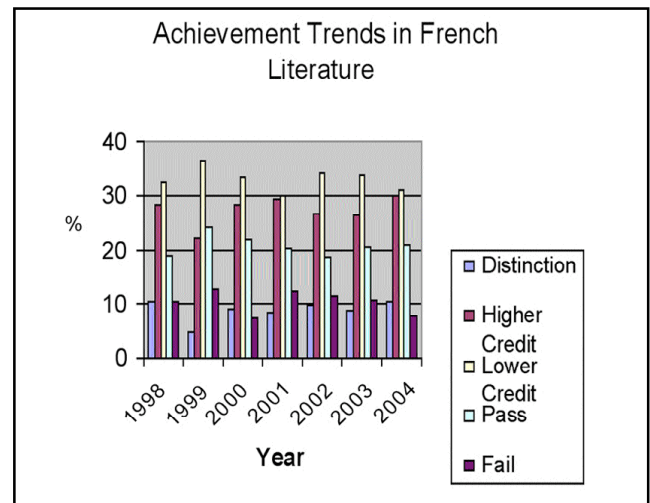
The issue here is not achievement of students in French but the underachievement of students in English language. In the various reform proposals which span nearly forty years of independence, there has not been a concrete proposal on language policy within our school. The last public debate focused on the use of creole as the medium of instruction and many proponents of creole claim that underachievement is an outcome of the use of a foreign language. But the statistics strongly hint at the possibility that the teaching of English itself is problematic and this may compound the underachievement trends in other subjects. It also indicates the pressing need to address the language issue in our curriculum.

² Distinction and higher credit were compared with grades A and B following the grading system at the level of SC.

3.5 Literature in English



French Literature



The results of Literature in English parallel those in English language despite the fact that it is not a compulsory subject at school certificate level. 60-65% of students taking part in these examinations have consistently scored grade 7 or less and an overwhelming average of more than 30% are failing except for 2004. Performance graphs at the level of French literature display a different trend with 32% scoring at least grade 7 and 68% scoring a credit. An average of 8% get a distinction and around 35% score a higher credit or more. Results tend to be clustered around grade 3 and 6.

The results in literature follow the same trends as in Languages, although one would have expected a distribution which is less skewed since choice of subjects is made according to aptitudes and interest. However, the failure rates for literature is much higher than for English Language. What could be interesting to investigate would be the relative performance of students who have taken both French Literature and Literature in English. Unfortunately the set of data available did not allow such tracking down. But it does seem clear that inability to master English language is a hindrance to achievement in subject areas where language is the main vehicle to convey ideas and express understanding. This seems to be especially the case for literature subjects as well as Economics and Business studies where failure rates are comparable to that of Literature in English.

A number of issues and qualifications can be raised in line of the above statistics:

- (i) Though many confessional schools have a policy of making literature in English compulsory, it is often in the wake of silent resistance of parents and pupils.
- (ii) How far has the teaching of literature in schools evolved in the light of innovative pedagogies?
- (iii) Is there any bias in school time tabling arrangements against literature subjects?
- (iv) How actively is reading promoted among secondary school students especially in the context of technologically driven societies?

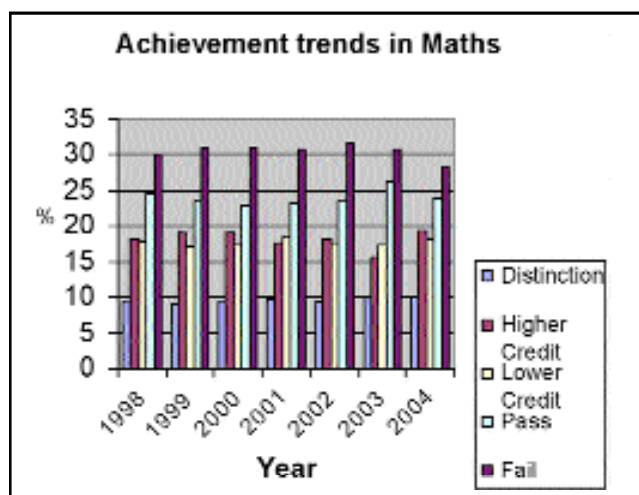
3.6 Performance in Mathematics

YEAR	Distinction	Higher Credit	Lower Credit	Pass	Fail	Overall
1998	8.9	19.9	19.0	22.8	29.4	100.0
1999	8.6	19.4	18.8	22.2	31.0	100.0
2000	8.7	19.1	18.3	22.8	31.0	100.0
2001	8.4	18.2	19.1	22.6	31.7	100.0
2002	8.1	16.0	16.5	24.4	35.0	100.0
2003	8.8	13.9	16.2	26.8	34.3	100.0
2004	8.4	16.1	17.2	25.7	32.6	100.0
	8.6	17.9	18.1	23.6	31.9	100.0

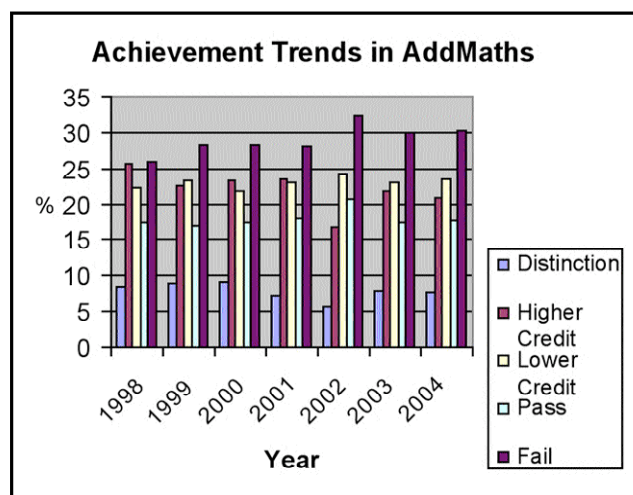
3.6.1 Maths Subjects

The trend for all mathematical subjects included, reveals a high rate of failure around 30% and a percentage 50% of students taking part in examinations score a maximum of grade 7. The distribution between higher and lower credit is balanced with a more or less similar percentages.

Mathematics D (Calc)



Additional Mathematics



Mathematics is a compulsory subject for all students taking part in the SC examinations except for low achievers who opt for the alternative Maths paper (4021). Students sitting for SC examinations Maths have been reading for Maths for the past 11 years on average and every year an average of 30% fail. 50% score a maximum of grade 7, less than 10% a distinction. This trend has been more or less stable for the past 7 years. There is a worrying similarity between failure rates at CPE in Maths and at SC level; both have hovered around 30%.

Mathematics is considered to be the subject, par excellence, for developing logical thinking, a disposition which is deemed to be essential for the education of a complete human being. Discipline, rigour, objectivity are the additional qualities which Mathematics seeks to develop as a subject. Failure in Mathematics then cannot be interpreted only as a failure to master academic skills but to develop a whole mindset and attitudes as well as core problem solving skills, which are of primary importance for survival in a world driven by technology and science.

Furthermore, Additional Maths is a popular option with students, especially for those taking up science and business studies. The failure rate, over the years, under study, has hovered around 28% over the seven year span which is among one of the lowest across different subject categories. Additional Maths is generally perceived as a more difficult option and taken by candidates who have normally scored a credit in the subject. However, despite this pre-requisite, examiners have noted that:

“there seemed to be a considerable number of candidates inadequately prepared and lacking basic skills and knowledge.” (SC Examiners Report, 2001)

“... but also many from candidates who were inadequately prepared for the examination...” (SC Examiners Report, 2004).

It does appear that while some candidates are fully prepared and can deal successfully with different types of questions, others neither have the basic skills and have not been groomed to take the examinations. This differential achievement is also concentrated in specific centers and the issue will be taken up in the school differential achievement section. It seems that for subjects like Additional Maths, which require sustained and careful drilling/ training, the teacher effect appears to be significant.

Despite the fact that it is not within the scope of the current study to establish causal relationships between teacher, teaching and achievement, it cannot underplay issues about teacher's appraisal, teacher's license/tenure, accountability and teacher's support networks.

In addition given the specificity of the Mauritian context and existence of a parallel system, how do we determine the school/ teacher effect?

3.7 Performance in Science

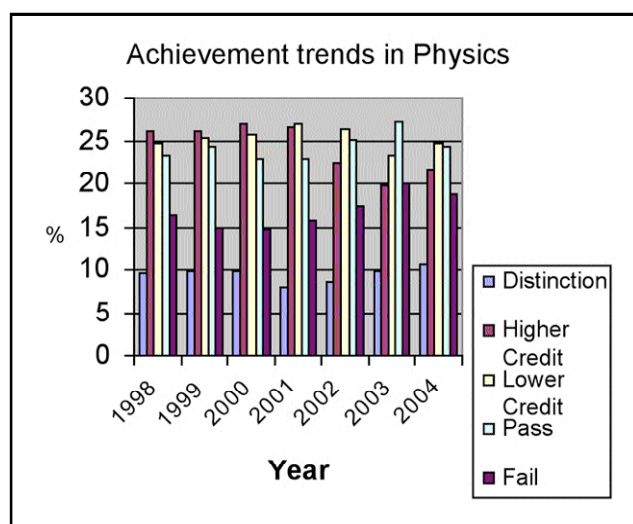
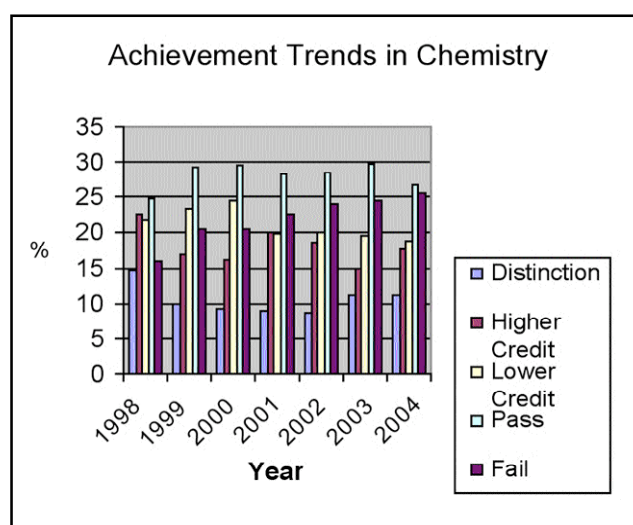
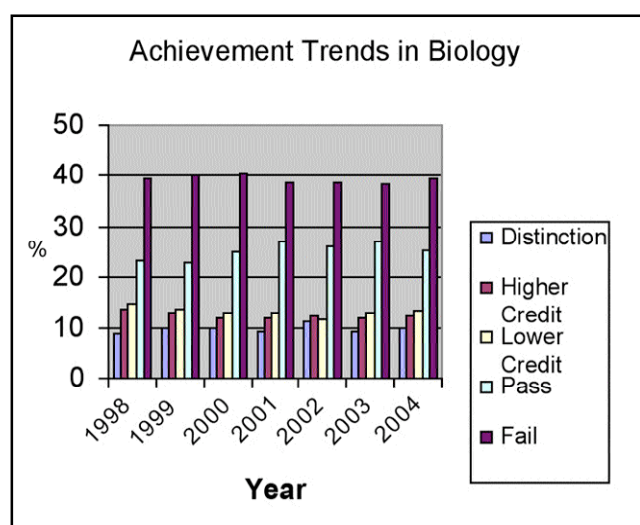
YEAR	Distinction	Higher Credit	Lower Credit	Pass	Fail	Overall
1998	11.8	24.0	22.9	24.2	17.1	100.0
1999	9.3	18.2	21.0	25.9	25.6	100.0
2000	9.4	17.9	21.4	25.6	25.8	100.0
2001	8.7	19.1	19.7	25.8	26.7	100.0
2002	8.6	17.6	19.8	27.2	26.8	100.0
2003	10.6	15.6	18.4	27.8	27.7	100.0
2004	10.2	17.0	19.1	26.0	27.6	100.0
	9.7	18.1	20.1	26.2	25.9	100.0

The statistics reveal that generally more than 25% of students fail at SC level and an equal percentage score only a pass. Science subjects include Chemistry, Physics and Biology and on average for students, who choose at least one science subjects, around 9% only earn a distinction. Around 50% earn a maximum of 7 grade, while more than 70% score a maximum of grade 5. The figures are comparative with trends in Additional Maths and may hint at the fact that around either subject choices are not being judiciously made or it could also mean that the teaching of Science irrespective of its specific field must be revisited and viewed more as providing a basis for students to apply their knowledge. As reported in the Examiners report 2004 for Chemistry:

“Some very strong performances were seen, but unfortunately a large number of candidates were not well prepared for the examination in terms of their subject knowledge or skills at answering examination questions.”

Those questions involving evaluative skills and demanding application of knowledge to unfamiliar contexts were generally not well answered. Science can be construed as both labour and capital intensive subjects requiring teacher’s guidance, demonstration, monitoring as well as the provision of adequate laboratory equipment and technical assistance. An issue can be raised here as to the monitoring of both teacher factor and school factor by relevant authorities.

3.7.1 Biology, Chemistry and Physics



Over the seven year under study, Biology has demonstrated the highest failure rate with consistently around 40% students failing their examinations and around 62% scoring a maximum grade of 7. The percentage of students scoring a distinction is similar to those registered in other subjects, that is, around 9-10%. What really marks out performance in Biology is the lower % of students scoring a low credit of 5 or 6 as compared to the trends in other subject areas. The perception that Biology is a “heavy” subject requiring rote learning persists and could very well function as a self fulfilling prophecy.

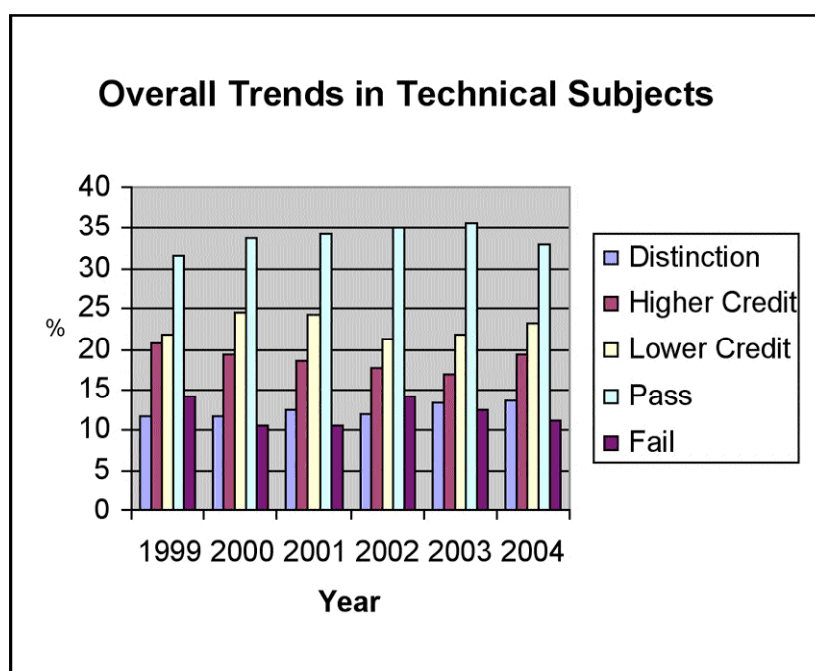
The failure rate in Chemistry has been on the rise consistently as from 1998. There has also been a shift towards the lower end of the distribution as evidenced by the decreasing percentages scoring the lower credits rising percentages in the two lower grade categories.

Interestingly, contrary to general perception, failure rates are lowest in Physics. Scores are clustered around the average grades. The performance is generally better as compared to the other two sciences with around 50% students scoring a credit in the subject. One of the key elements explaining performance in optional subjects relates to students' choice and perception about the level of difficulty of the subject. Physics is a case in the point. It is "reputed" for being a tough subject and as such, students who are either weak in Maths or have to struggle with Science will not choose Physics. The "better" achievement levels in Physics may also be attributable to the better screening of students at the entry point.

Similarly to all subjects for Maths and Biology the modal grades are 3 and 6. In Physics, though there is comparatively a lower percentage of students who earn a distinction, the statistical distribution is more balanced with lower failure rates over the seven year period.

At a time where government publicly declared policy is to put emphasis on science, the gap between political discourse and achievement trends cannot be overlooked. It highlights once again the chasm that exists between the politics of education and the pedagogy of classroom reality.

3.8 Achievement in Technical subjects



Generally the failure grades for technical subjects is lower compared to others subject streams although there is still an overwhelming percentage who score a pass grade 7; 34 % of students on average only score a pass. The percentage of students scoring a distinction is slightly higher than any other subject streams.

Technical subjects basically include a significant section on practical work and / or a project as a form of assessment. However, in pedagogical terms, technical subjects also involve a different form of learning which seeks to tangibly apply learning in a concrete situation. It is generally construed that technical subjects are “less difficult” and tailored to the needs of those who are not academically oriented. However, the statistics show similar trend with more academic subjects. Examiners reports support the idea that both technical and academic subjects require sound theoretical understanding to be able to apply it in concrete real life situations. In this light, technical subjects can be perceived as being more demanding because the production of tangible objects requires a thorough mastery of the different elements of diverse theoretical perspectives in order to bring them to bear on an issue.

To enable students to master those clearly higher order thinking skills, a hands-on experience approach is recommended. Additionally, candidates are assessed through a combination of summative and project work except for Food and Nutrition which incidentally has the highest failure rates within this category.

3.9 Technical Subjects Distribution

3.9.1

YEAR	Group 1					Group 2					Group 3				
	Design & Communications					Computer studies					Design and Tech				
	Distin	Higher Credit	Lower Credit	Pass	Fail	Distin	Higher Credit	Lower Credit	Pass	Fail	Distin	Higher Credit	Lower Credit	Pass	Fail
1999	8.0	23.0	23.4	33.5	12.1	16.0	21.0	21.8	30.7	10.5	16.9	26.5	21.1	30.1	5.4
2000	8.0	24.0	24.2	32.2	11.7	16.2	17.0	25.1	34.7	7.0	1.8	17.9	28.3	40.8	11.2
2001	9.3	23.6	24.8	32.0	10.3	16.2	17.5	23.8	34.1	8.5	7.8	16.4	22.5	43.0	10.2
2002	7.0	25.0	24.8	31.2	12.0	15.9	16.3	20.2	36.2	11.4	8.5	21.2	19.1	39.0	12.3
2003	8.8	21.5	26.4	32.4	10.9	15.9	14.9	21.7	36.9	10.6	12.9	29.6	15.6	36.1	5.8
2004	9.7	28.8	27.7	28.9	4.9	16.1	16.4	21.8	34.8	11.0	14.1	29.1	21.1	31.0	4.7
	8.5	24.4	25.3	31.6	10.2	16.0	16.8	22.2	34.9	10.1	10.5	24.0	21.0	36.5	8.0

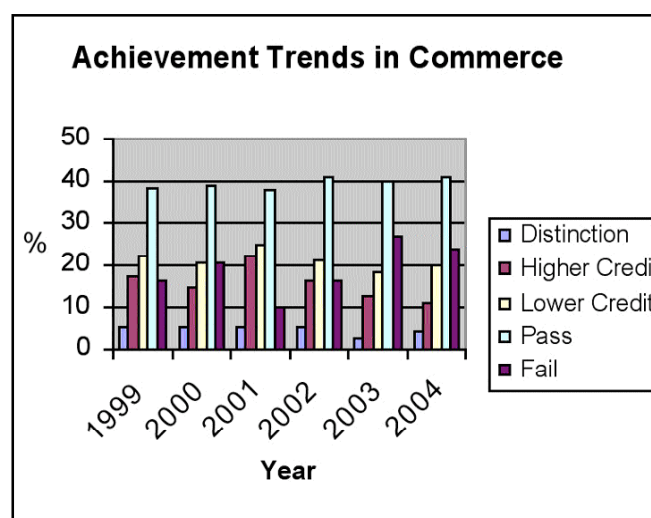
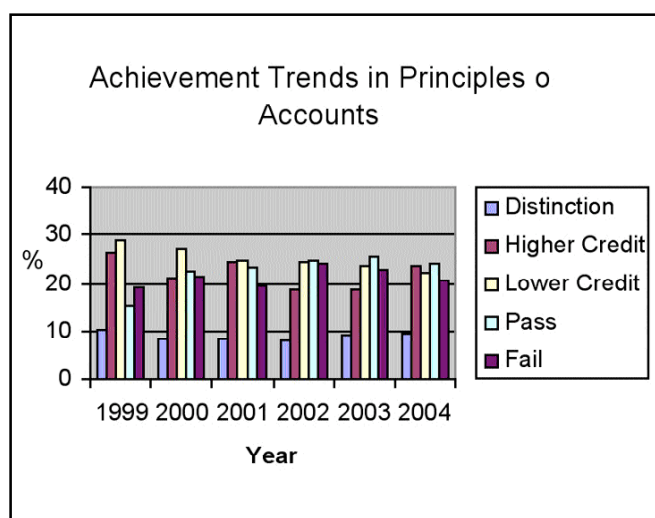
3.9.2

Fashion and Fabrics							Food and Nutrition						
YEAR	Distin	Higher Credit	Lower Credit	Pass	Fail	Overall	YEAR	Distin	Higher Credit	Lower Credit	Pass	Fail	Overall
1999	1.9	17.4	28.5	37.7	14.5	100.0	1999	5.5	14.6	15.8	31.0	33.1	100.0
2000	2.0	11.8	27.5	40.2	18.6	100.0	2000	10.4	23.4	19.7	27.6	18.9	100.0
2001	3.7	12.1	28.5	38.3	17.3	100.0	2001	8.6	16.1	24.9	33.9	16.5	100.0
2002	4.3	14.4	21.7	42.6	17.0	100.0	2002	8.8	12.3	19.8	31.6	27.5	100.0
2003	4.6	11.5	26.3	45.8	11.8	100.0	2003	10.3	16.6	15.9	31.6	25.7	100.0
2004	4.5	14.2	27.3	36.3	17.6	100.0	2004	8.0	18.1	21.8	27.8	24.3	100.0
	3.6	13.6	26.4	40.3	16.1	100.0		8.7	16.6	19.6	30.6	24.5	100.0

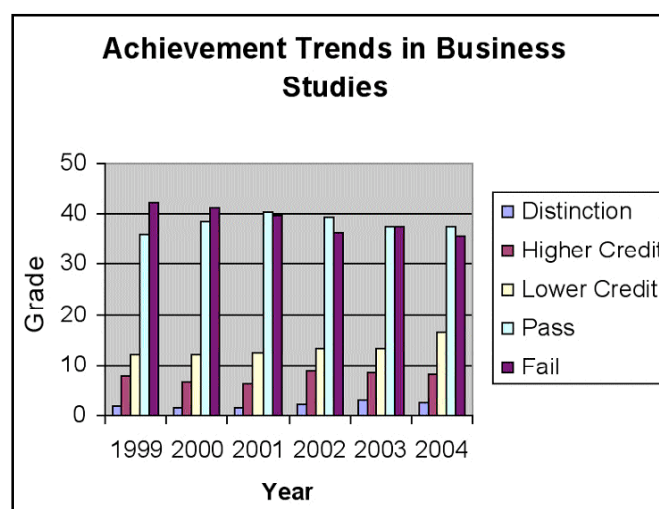
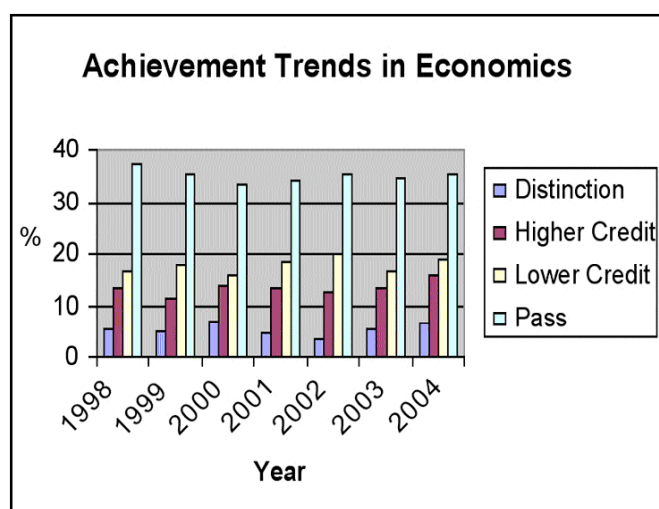
Fashion and Fabrics and Food and Nutrition are offered only in girls school and represent the technical side for girls. Failure rates is much higher than for boys technical subjects and as much as the double % in both cases. Around 55% of students opting for these disciplines score a maximum of grade 7 whereas only 8% can aim at a distinction and 16% at a higher credit.

3.10 Achievement in Business Subjects

YEAR	Distinction	Higher Credit	Lower Credit	Pass	Fail	Overall
1998	5.5	13.3	16.3	37.4	27.5	100.0
1999	7.5	19.2	23.4	26.2	23.7	100.0
2000	6.8	16.6	21.5	29.5	25.6	100.0
2001	6.1	18.6	21.3	30.2	23.7	100.0
2002	5.6	15.4	21.1	31.6	26.3	100.0
2003	6.6	14.9	19.4	31.3	27.8	100.0
2004	6.9	17.5	19.9	31.1	24.6	100.0
	6.6	16.9	20.9	30.3	25.3	100.0



An analysis of the overall performance for business subjects reveals a high % of failure and a distribution which is overly skewed at the lower end of the scale. Only 6% of students on average can score a distinction while 55% have achieved at best, grade 7.



Business studies records the highest rate of failure as compared to all other business subjects and mainstream subjects, that is an average of 38% failure every year. Only 10% students reach the higher performance bracket, that is, distinction (only 2.2 % on average) and higher credit. On average more than 75% score only a maximum grade 7 while the modal grade is 8. Examiners' Reports have consistently pointed out that, in some centres, core concepts have not been taught. Business studies as a subject was introduced in the Mauritian context in the 1990s and the responsibility was given to economics teachers. In the informal interviews carried out with the business studies teachers, it was claimed that no continuous professional development was given to teachers to support the introduction of the subject. Could there be a link between the noted fact that teachers do not teach particular topics and the support provided to them? The "nonchalance" and superficiality with which curriculum management is carried out, reveals the absence of synergy between the MES, MIE and the Ministry of Education and Human Resources. Can subjects be introduced if the pre-requisites in terms of teacher training is not guaranteed?

The same trend is observed in Economics where on average 28% of examinees consistently fail their exams and a combined average of 63% score a maximum of grade 7. Analysis of some examiners report (1998, 2000, 2002, 2003) highlights candidates inability to translate theory into practice. It also appears that candidates are not able to read and properly decode questions although their knowledge of the theory is sound. There is a strong hint that the subject must be taught in relation to the local economy and not as only as theoretical concepts purely. It is highlighted in the Examiners' Report (1998) that:

"Higher marks could be also be gained by using facts and features of the candidates own local economy and by reading the question carefully so as to answer the question set and not produce a piece of general rote learning on the topic concerned."

The trend seems to have persisted into the early 2000 if one goes by the examiners' comment:

"the basic knowledge was for the most part, sound, but was frequently left at an elementary level with a restricted attempt to develop the idea in the way indicated by the question."

It was further added that candidates must not only present cases for or against but should learn to assign weights to the arguments presented and to judge the validity of these arguments as exemplified by the following:

“In order to gain high marks in questions that ask for a discussion, candidates need to present more than one side of an argument and then come to a conclusion. They should also be prepared to state their own view of the matter.”

Performance distribution for Commerce is also heavily tilted towards the lower end but the failure rate is lower than the average for all subjects. The modal grade for Commerce is 7.

Performance in terms of both pass and fail and grades is higher in Principles of Accounts as compared to all other business subjects. Failure reached an all time high in 2002. A large proportion of students seem to achieve only a lower credit (5&6) but above 30% of students also score a minimum of grade 4.

For Principles of Accounts the distinction rates are unexpectedly low given the fact that the subject is perceived as being an easy option. Indeed the number of candidates for Accounts is one of the highest, placing it as a popular choice among candidates. However it does seem that the achievement levels hardly match the public perception of it as a subject. The discrepancy between the general expectation and the trends highlight:

- (i) the need for teachers and education professionals to better guide students when it comes to making informed choices at the level of form IV.
- (ii) National debates about curriculum development require sensitization of teachers.

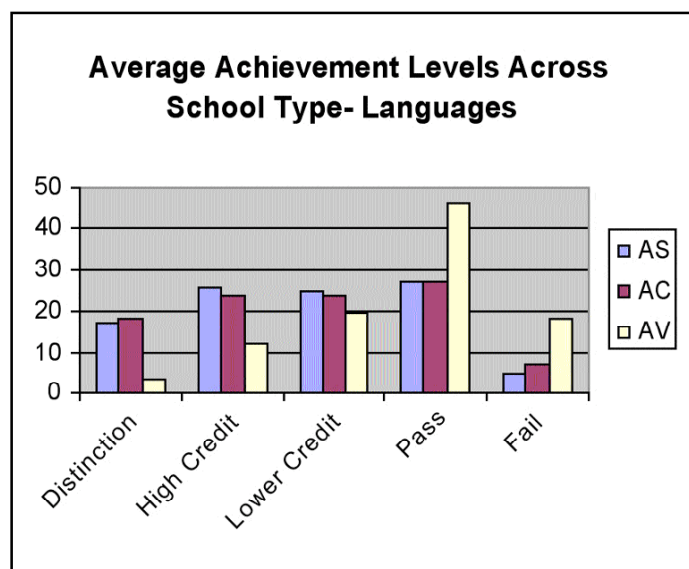
The situation which is characterized by a taken-for-granted attitude has to be redressed. With such rates of low achievement or failure, why is it that students who may not have the particular disposition continue to opt for such subjects? What are the provisions made at the school level to ensure that the right guidance is offered to enable students to match ability and dispositions to subject choices. Or is it because of the limited options offered, students are compelled to choose subjects for which they may not be inclined? The dismal picture which emerges when the subject streams achievement is analysed bring to the limelight a number of fundamental questions regarding the flexibility of our curriculum in responding to the needs and wide spectrum ability of our students. It is clear that the problem is essentially pedagogical and is concerned with the way they are taught and the nature of classroom transactions and learning activities. However, there are also undoubtedly issues that pertain to opening up the system to less traditional subject choices that reflect the individuality of a young adult rather than trying to fit their wide range of aptitudes in particular compartments. It is also equally clear that human resource requirements have to be taken into account but, is it not time to move to a situation where the demand creates the supply rather than the reverse?

3.11 Educational Achievement and School Type

3.11.1 The Rationale

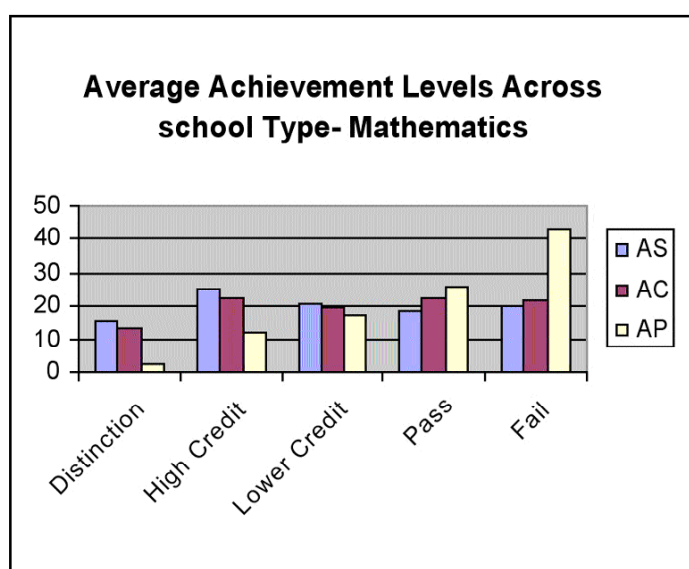
The administrative distinction among the different types of colleges in terms of management authorities has been maintained. As such the three broad categories of State, Confessional and Private have been used as a basis for comparison despite the common acknowledgement that there exists a wide disparity especially among private schools.

3.11.2 Achievement distribution Across School Type- Languages



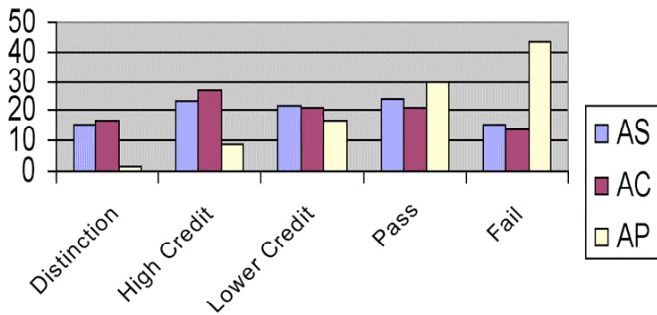
The survey reveals that for languages in general, the state schools exhibit the best performance although there is no large disparity with confessional schools. Achievement is lowest for private schools with a large majority of students (around 64.5%) scoring a maximum of grade 7 but there is indication that the trend is improving. However, it is interesting to note that across school type a **constant average of 30% score grade 7 as per the national average**. The substantial gap which exists across schools types differentiated administratively must be interpreted **with caution given that the balance between high and low achieving schools may vary from one category to the other**.

Mathematics



Achievement trends are similar in confessional and state schools but the gap between the former and private schools remains substantial. **Private schools have, on average, registered a failure rate of more than 40% and the same trend is sustained for Add maths which is not a compulsory subject**. The middle grades (both lower and higher credit) have registered the lowest percentages in such schools producing a highly skewed distribution for average schools whose rate of failure is almost double those of state and confessional schools.

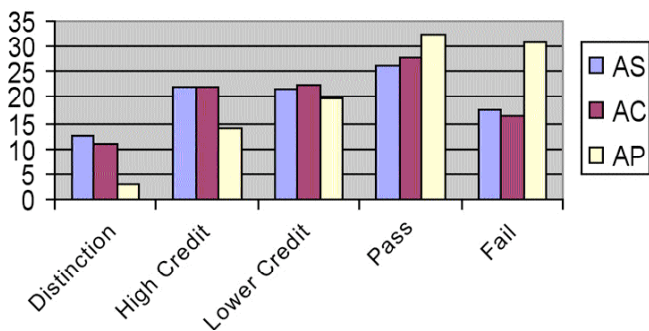
Average Achievement Levels Across School Type- Science



Science

Confessional schools seem to have a slight lead in science subjects on average over the 7 year period with a distribution that is more equally spread as compared to government schools. But the most evident observation is in terms of the astounding discrepancy of the two above mentioned schools as compared to private schools- **a clean difference of 15% point in the distinction and higher credit categories** and 70% of students scoring a maximum of grade seven. The pattern seems to be consistent across subjects.

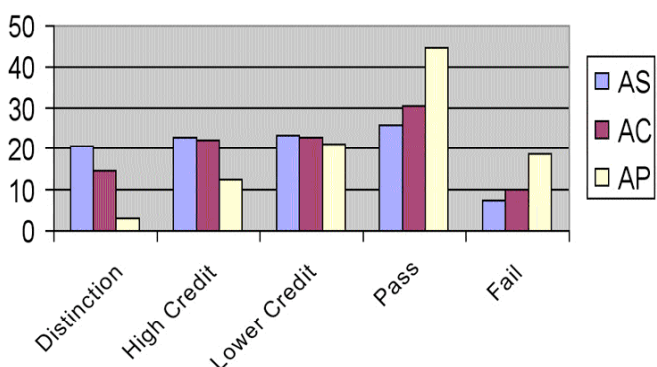
Average Achievement Levels Across School Type - Business Subjects



Business Subjects

For business subjects, the state school fare slightly better than confessional schools in terms of distinction but on average, over the seven year period, the former has a lower failure grade. The trend observed in other subjects is maintained in terms of the discrepancy between state and confessional on the one hand, and the private schools on the other hand, though the magnitude of the gap is less for business subjects.

Average Achievement levels Across School Type- Technical Subjects



Technology

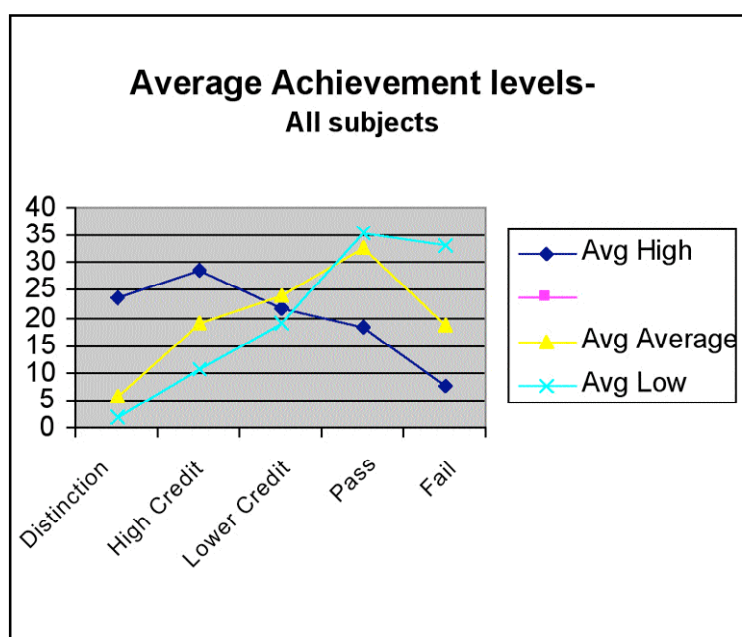
The achievement patterns produced by the set of data over the 7 year period shows a **clear cut lead by state schools over both confessional and private, a gap of 6 and 17 % points respectively for distinction and 3 and 11 % points for failure**. The results for State schools are more or less equally distributed across the different categories.

3.12 Achievement Among High, Average and Low Achieving Schools

3.12.1 The Rationale

School type has been viewed along the lines of overall pass and fail rate at School Certificate level. Schools with a pass rate of 90% have been categorized as high achieving schools. The decision to place the cutting pass rate at 90% is based on the statistical understanding the two ends of the spectrum account for approximately 10% of the distribution, that is 10% of the total number of secondary schools register a pass rate of 90%+ and 10%, a pass rate of 50% or below, the remaining 80% cover cluster around the 60-70% pass rate. The purpose for making this distinction and analyzing subject wise results subsequently is to establish whether the differential educational achievement recorded at overall level is reproduced at the particular level of the subject stream.

The implicit hypothesis being made here relate to the fact that discrepancies may not be of the same magnitude across all subject streams. The ultimate purpose is to identify those subject streams where the gaps are less significant. Apart from the inherent benefits of developing the statistical data bank for such information, the added advantage of mapping out school subject achievement profiles should not be underestimated if the achievement divide is to be overcome across school types and equal opportunity be given to students irrespective of the school attended.

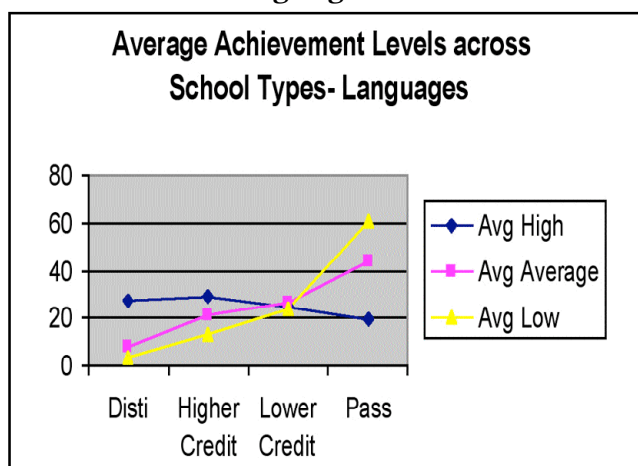


For all subjects considered in terms of grade classification, high achieving schools have taken a substantial lead insofar as 25% of their students score distinctions in any subject taken at the level of SC as compared to an average of 5.7 % only for average schools and 1.9 % for low achieving schools. Thus the pattern reveals that as compared to a child in a low achieving school who has around 2 out of 100 probability of scoring a distinction or a student in an average school has a probability of 6 out of 100 whereas a student in a high achieving school has 1 chance over 4 of getting either grade 1 or 2. **This data has necessarily to be interpreted against the background of quality of intake at form I which appears to be determinant factor.**

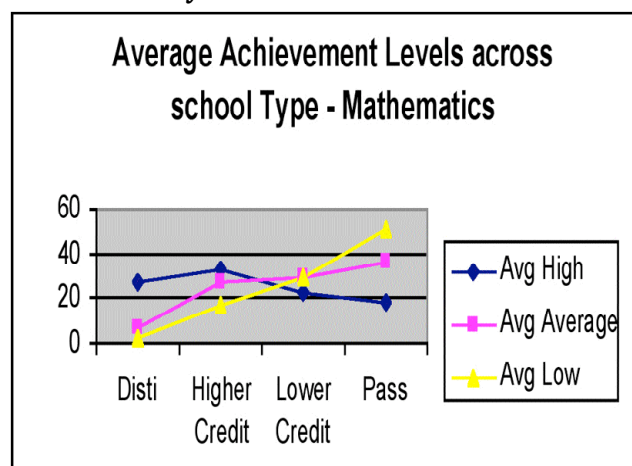
Further, the whole concept of what is termed of an average school in terms of pass/ fail rate is somewhat inaccurate since, in terms of distinctions, the chances are less although the discrepancy in terms of pass and fail may only be of 10- 20%.

For the subject wise analysis, we have considered only four categories instead of the initial five by removing the failure brackets because our concern was to see how achievement was distributed among passes.

3.12.2 Language

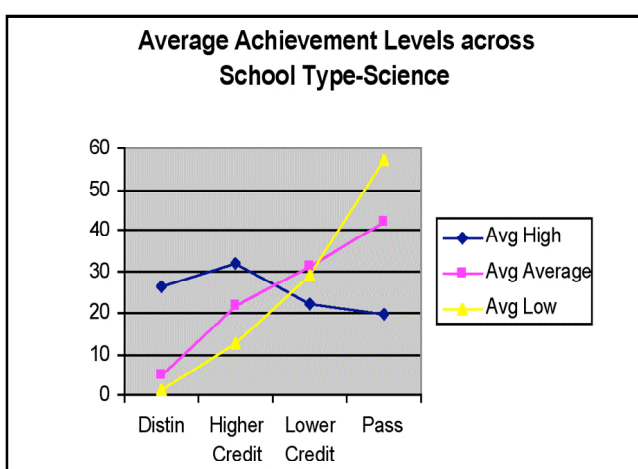


Maths subjects

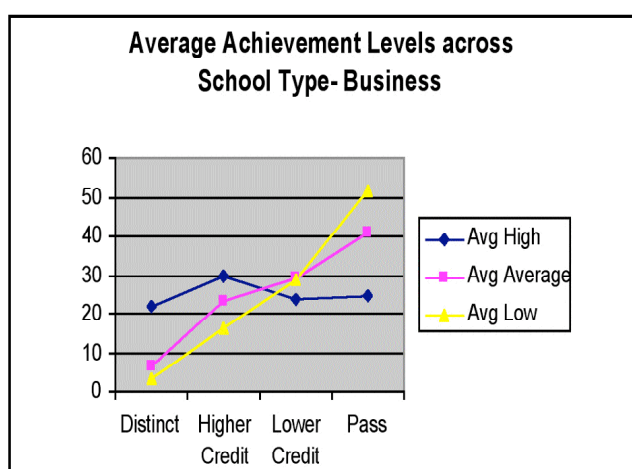


Comparison among schools differentiated on lines of overall pass and failure levels reveals interesting patterns. While in both Mathematics and languages, the largest gaps occur at the ends of the distributions, it is clear from the statistics that the discrepancy though still substantial is less significant for Mathematics as compared to languages. The language gap seem to be prominently emphasized even though achievement in French has been above the averages of all subjects. The plausible explanations are often embedded in social learning theories from which a number of modern language acquisition theories have branched off. The data gestures towards a mix of the discourse view of language acquisition and interactionist theories insofar as high achieving schools provide an academically stimulating environment where children of high abilities and with already rich linguistic backgrounds interaction. Indeed, as Vygotsky³ highlighted the child's linguistic and cultural environment is a key determinant in the child's linguistic competency. Theories of discourse⁴ (Hatch, 1983) argue that interaction with other speakers is the critical dimension in learning language, i.e., syntactic structures develop from conversations. It does appear that there is a significant environment effect on student's achievement given the differential achievement in languages and Maths. An equally important point to be raised is about the superficiality with which the oral components of language is treated. Results seem to be clustered around grade 7 as compared to the largest category in high achieving schools is grade 3 in English.

3.12.3 Science

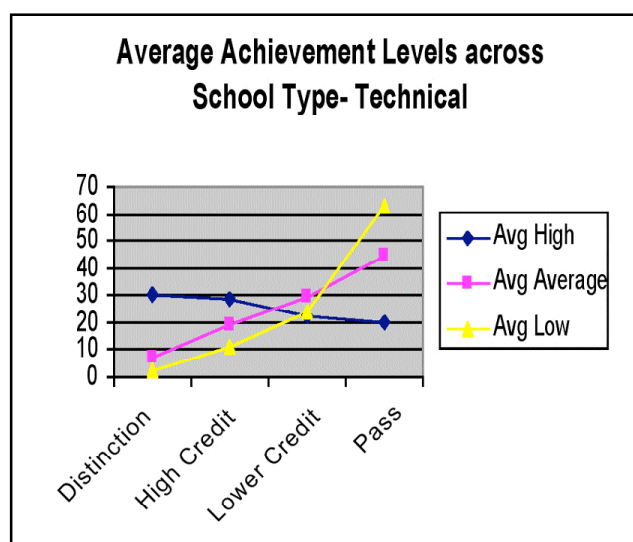


Business Studies



³ Lantolf, J. P. (2000). Introducing sociocultural theory. In J. P. Lantolf (Ed.) Sociocultural theory and second language learning. Oxford: Oxford University Press.

⁴ Child Psychology (2003): A Contemporary Viewpoint Updated, 5/e, Ross D. Parke, University of CA at Riverside
Mavis E. Hetherington, University of Virginia



In Science, the achievement patterns reflect a very large gap between high achieving and average achieving school although there is only a 10% point difference on the failure rate. At the upper end of the distribution, 20% point difference is recorded although it tends to even out in the middle grades. A sharp difference is again noted in grade 7.

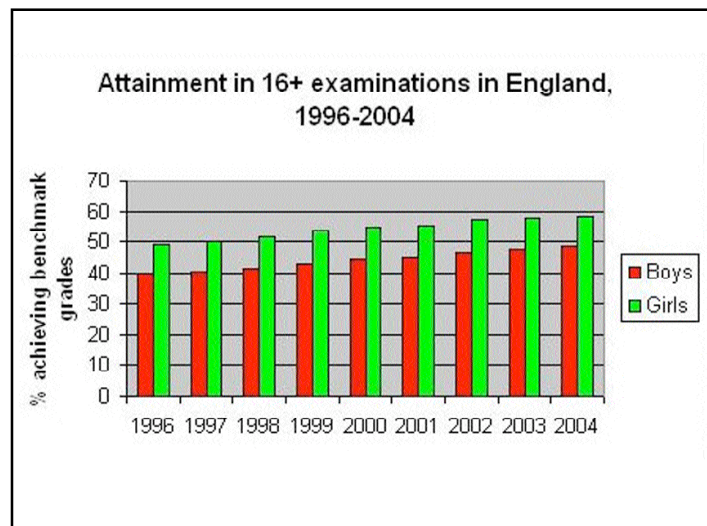
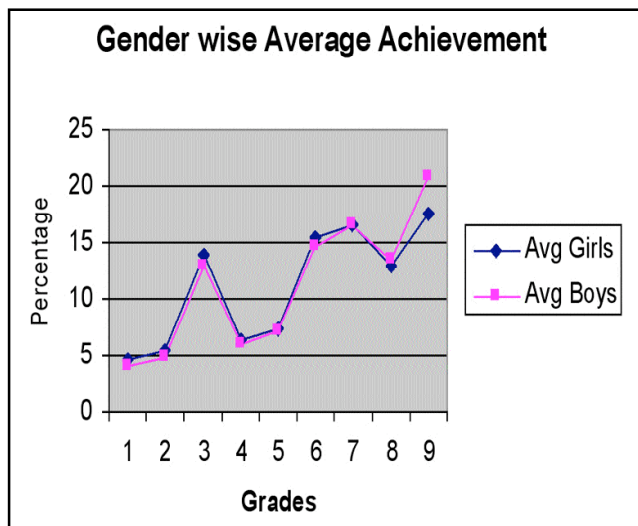
Low achieving schools have registered an average failure rate of more than 50% throughout the period - a figure which is statistically compatible with their overall failure grade although the data reveals a constant downward spiral in terms of performance.

The data reveals a substantial discrepancy between high and average achieving schools. An average of 57% score a minimum of grade 4 in high achieving schools whereas less than half, that is only 23% score the same in average schools. The distribution among passes also highlight the same pattern. A student in a high achieving school has one chance out of two to score the top three grades whereas one in an average school has only one chance of five.

3.13 Distribution by Gender

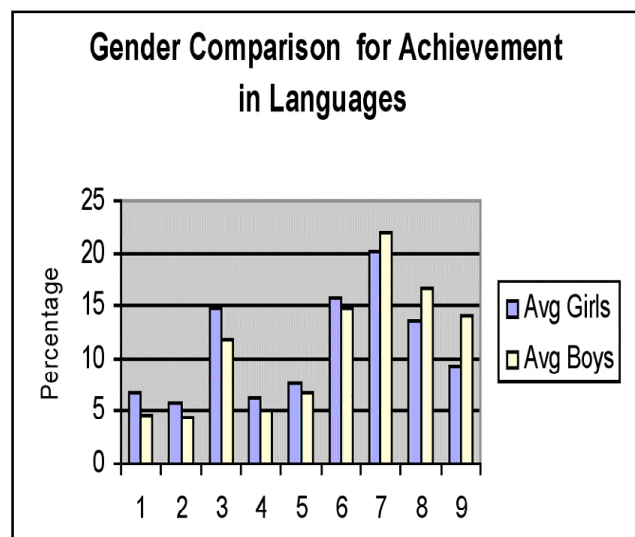
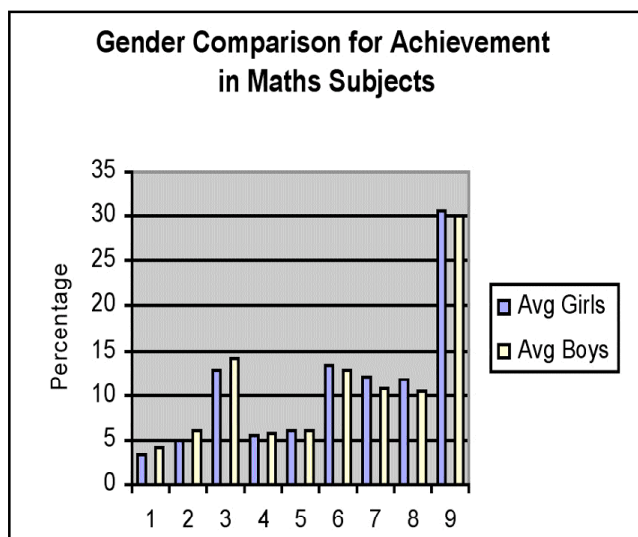
Differential gender educational achievement is a commonly referred to education phenomenon. While in many developing nations, what is generally observed at all levels relates to higher boys attainment and achievement, in Mauritius the data at the primary level reveals non linear gender differential achievement pattern.

The data used for comparison relates to the difference in percentages for boys and girls. Though a refined measure could be used by comparing the achievement for boys and girls relative to the achievement of all entries minus the entry gap. However given that overall the entry gap was only 1 %, the percentages were directly compared.



The statistics do not reveal a significant gender gap at the overall level although more boys are failing their SC Examinations than girls. The observed trend stands in contrast with the experience of countries like the UK (Younger et al: 2004)⁵ and Australia (Cortis and Newmarch:2000)⁶ where there is a significant difference as shown by the graph above. Compared to other countries where benchmarks are set and achievement is measured according to them, in Mauritius, there is no precedence of such practice and comparison can only be made at the level of aggregates. On the face of it, there does not appear to be a gender gap but if the subject wise distributions are analysed, a different picture emerges.

3.13.1 Gender comparison for Maths subjects and Languages

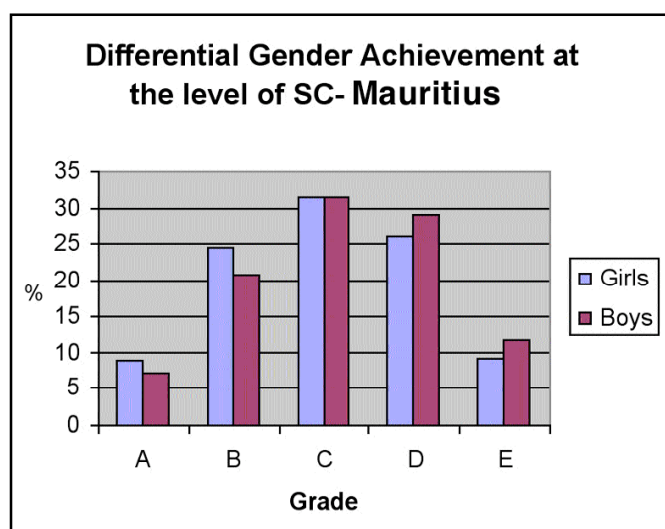
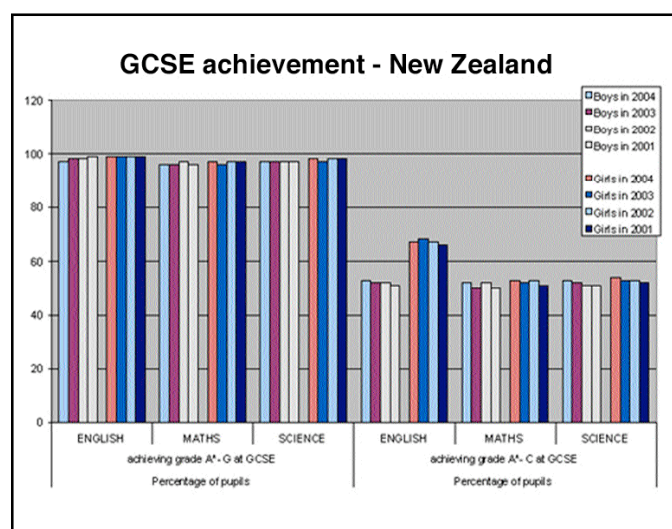


Despite the fact that the failure rates are comparable for the two gender groups, the data reveals that boys have outperformed girls in the higher grades for Maths. The 4% difference for the categories of distinction and upper credits when the distribution among passes is analysed, support this trend. However, it is to be noted that boys had an initial advantage at entry of secondary schools of on average 1% point as demonstrated in the section on gender statistics at CPE level. However, it does seem that it has been compounded at the level of SC.

⁵ DfES Research report RR63 raising Bboys Achievement

⁶ Boys in Schools- What's Happening paper presented at the International Interdisciplinary Masculinities conference, Queensland University of Technology

In the language group the pattern observed at primary level is reproduced at the secondary level with a larger percentage of girls scoring the four upper grades with a lower average failure rate of 9.2% as compared to 14.2 % for boys. The distribution among passes also reinforces this observation given that **on average 44% of boys who clear any language subject earn only grade 7 as compared to 37% girls**. The discrepancy is further compounded when the statistics on there is a higher proportion of girls than boys taking part in language examinations are considered. The current Mauritian experience show commonality with those of the UK and Australia where the gap is even more significant. For example in New Zealand (Cortis and Newmarch:2000), statistics reveal that overall, the percentage of 14 year old male students who demonstrate mastery on reading tests declined from 70 to 66% in the mid 1990s. Even when the statistics were adjusted for differences in socio economic status the gap remained significant.

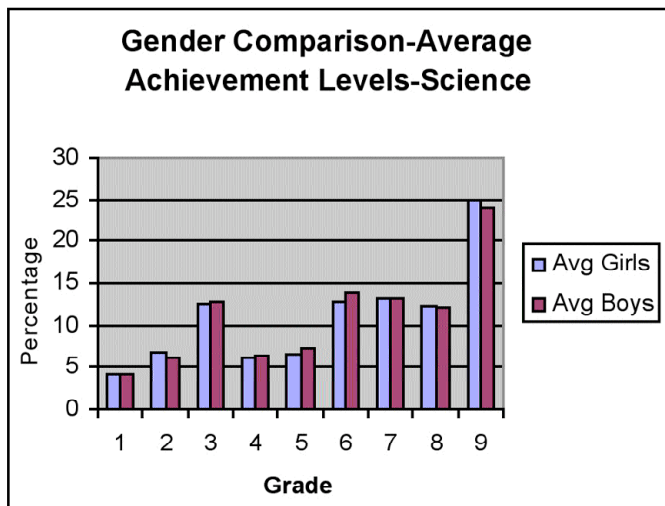


3.13.2 Gender comparison for Science subjects

In Science subjects, girls generally outperform boys in earning distinctions (14.9 for girls and 13.5 for boys) although for upper and lower credit boys have slightly the upper hand. This observation is contrary to the general belief that boys are better than girls in science subjects.

Gender segregation at the level of subject categories has already been highlighted, male predominance at entry at the level of Physics and Chemistry stands in stark contrast with the fact that girls achieve better in the traditional science subjects except physics. For confirmation of these trends, reference must be made to HSC results in science. The general picture given here must be cautiously interpreted given that there may be variations within categories. The trend in Mauritius seems to be contrary to a general world pattern highlighted in the TIMSS 1999 report (Grade 8) except for physics:

“Boys had significantly higher average science achievement than girls in 16 of the 38 countries in 1999. This was attributable mainly to significantly higher performance by boys in physics, earth science, chemistry, and environmental and resource issues. The gender gap in science achievement is especially apparent among high-performing students, with 29 percent of boys on average across countries in the top achievement quarter, compared with 21 percent of girls. The average gender difference showed a decrease from 1995 to 1999, principally due to the gap narrowing in Hong Kong SAR, Slovenia, and Israel.”



However, the report also drew attention to the narrowing of the gap in a significant number of countries such as Hong Kong as illustrated below:

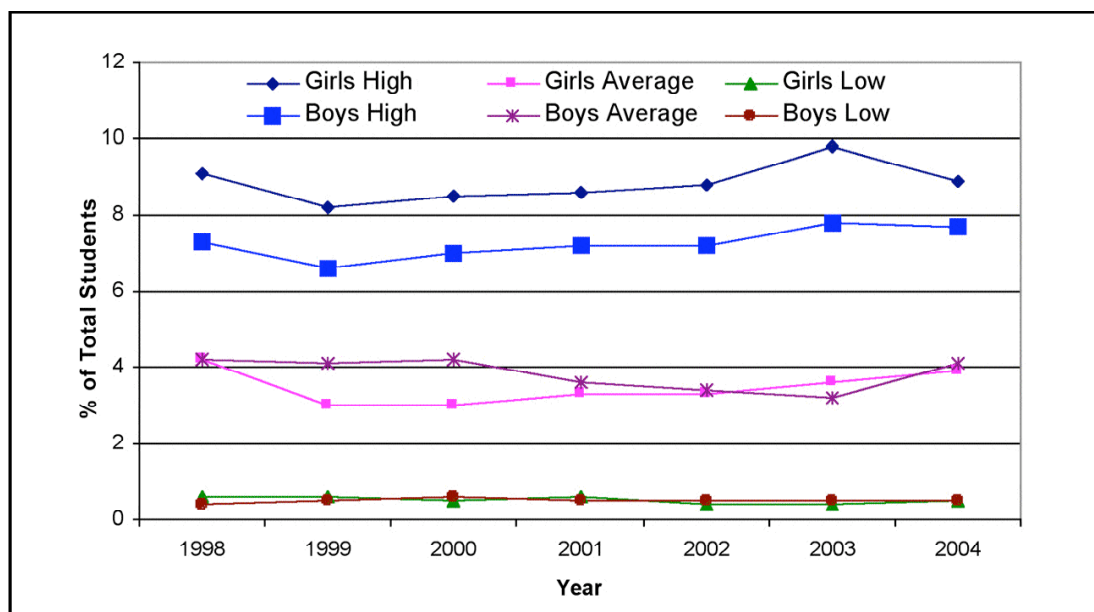
“On average across countries in 1995, achievement for boys significantly exceeded that for girls by 21 scale-score points. In 1999, the difference fell to 18 points, a statistically significant reduction in the gender gap. Average science achievement was greater for boys in 18 countries in 1995, but in just 13 countries in 1999. The countries that contributed to the overall decrease in gender difference were Hong Kong, Slovenia, and Israel, the only countries

that had a significant reduction in the gender difference between 1995 and 1999.” (TIMSS Report 1999)

It does seem that in the more developed countries the trend is towards girls’ improving achievement in science. Although relatively fewer girls still take science as an option, girls are rapidly catching up on boys. The interesting issue here relates to low girls’ enrolment on science courses especially in physics where there is a gap of more than 1500 boys compared to girls and especially if a higher percentage of girls clear the exams!

Unlike the experience of countries such as Chinese Taipei, Singapore, Latvia and South Korea (TIMSS: 1999), where significant improvements were registered, in Mauritius the achievement trends in Science have not been very encouraging. In the next section, the gender achievement gap is further analysed in terms of the different achievement brackets in order to produce a more accurate picture of the gender gap. The problem will have to be tackled on diverse fronts. A National Curriculum Authority will have to be set up whose aim is to monitor the curriculum and not only writing of textbooks.

3.13.3 Scoring Distinction in schools of different performance by Gender

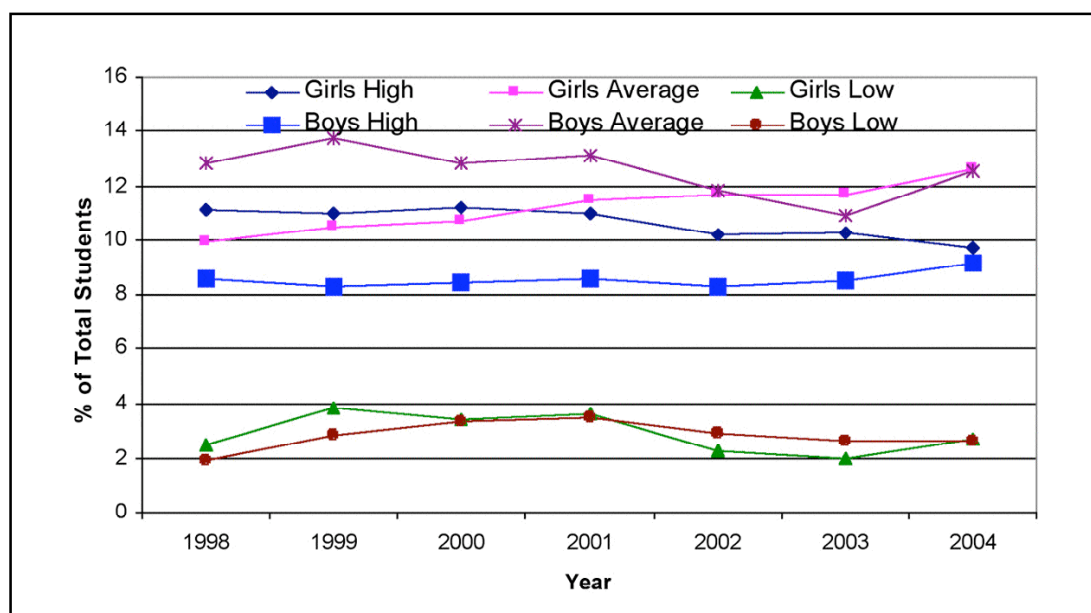


At distinction level, in any subject the percentage of girls have been higher by an average of 1.6% through out the years in the high performing schools. This effect is non existent in the schools with average and low performances where the percentage for both the boys and girls are equal for a distinction. The implications of the statistics in view of the insights developed in the course of the literature review are multidimensional. A number of view points have been advanced to explain girls higher achievement. Chief among these are that girls are likely to be more successful at schools because they have better dispositions to schooling and learning. As highlighted in the 2006 Report on Review of Strategies to Address Gender Inequalities in Scottish Schools:

“In terms of attitudes to school and learning, Sukhnandan et al (2000) describe girls as being, in general, better disposed to the demands of classroom activity than boys. They place a high value on the presentation of their work; they spend more time trying to improve what they produce (MacDonald et al, 1999); they care more about the opinions of their teachers (Davies and Brember, 1995; Bray et al, 1997); they derive more enjoyment from school life (Arnot et al, 1998).

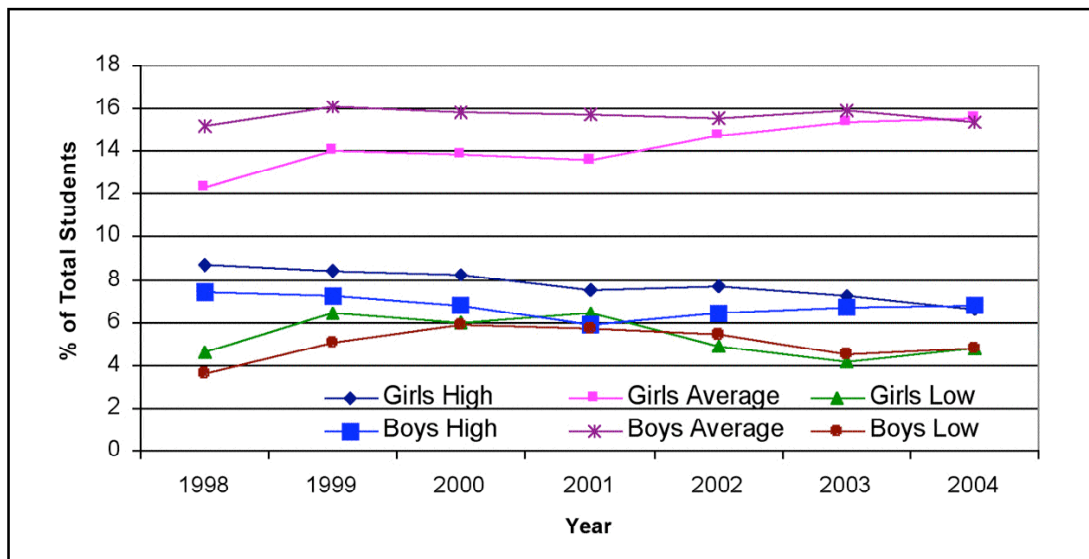
While attitudes to school seem to be a crucial factor in explaining the gender gap, international literature also draws attention to the interaction between the gender variable and other determinants like class, socioeconomic status, family support and ethnicity. (Education Review Office, New Zealand: 1999).

3.13.4 Scoring Higher Credit in schools of different performance by Gender



The graph clearly reveals that over the seven year period girls in high achieving schools have performed better than boys although in other school types, there have been year to year fluctuations. The recent trends reveal that in low achieving schools boys are overtaking girls, whereas, in average achieving schools girls are rapidly overcoming the differential.

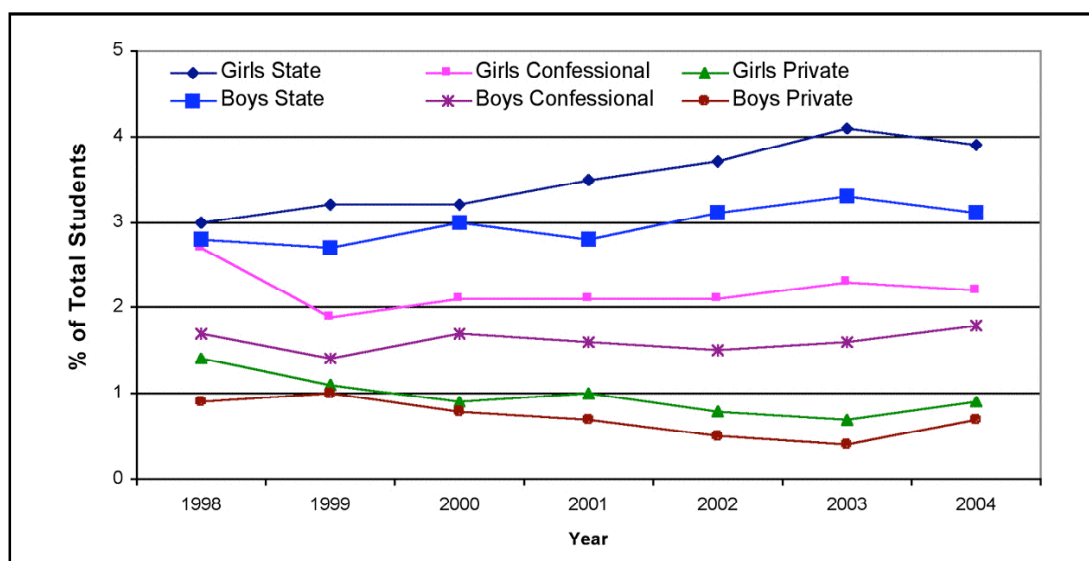
3.13.5 Scoring lower Credit in schools of different performance by Gender



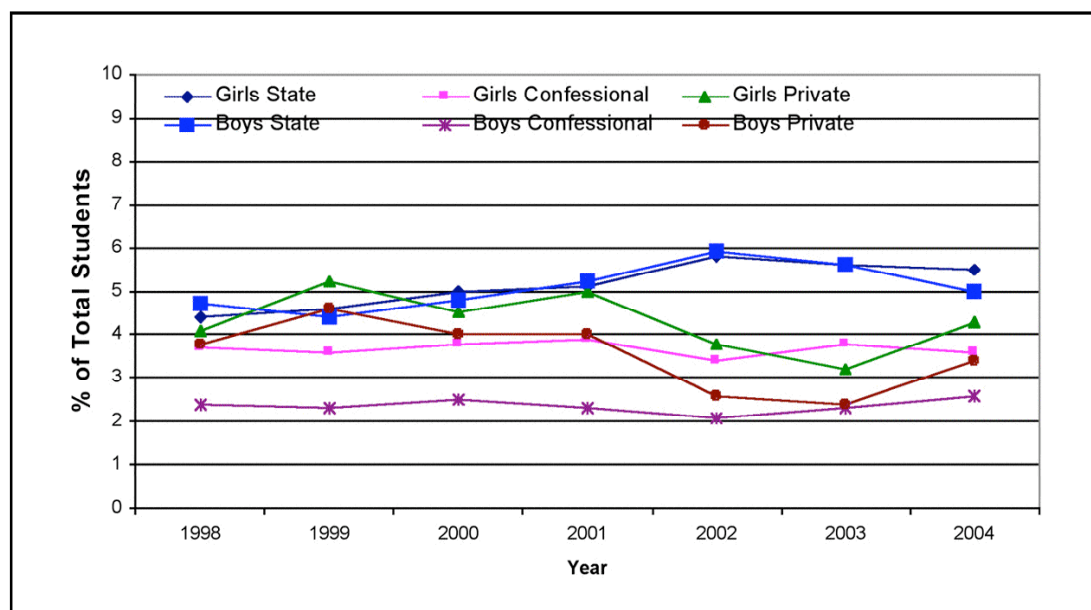
The data pattern for low credits has to be cautiously interpreted because lower percentage rates could either be interpreted as an improvement if performance has shifted to higher brackets or as evidence of poorer performance if the shift has been towards the pass rate only. However, given the profile of low achieving schools an increase in the % on the lower brackets will be interpreted positively.

A study of the graph shows that for high achieving schools, a higher % of boys compared to girls used to score within the lower brackets but for the last year the % tend to converge. However given the stability in terms of girls' failure rates, this can only be interpreted as a shift towards the higher scores rather than the lower ones. For average schools, there is a higher percentage of boys scoring within the lower credit brackets but that does not necessarily imply that boys are performing better given that girls are shifting from pass grade to credit grades.

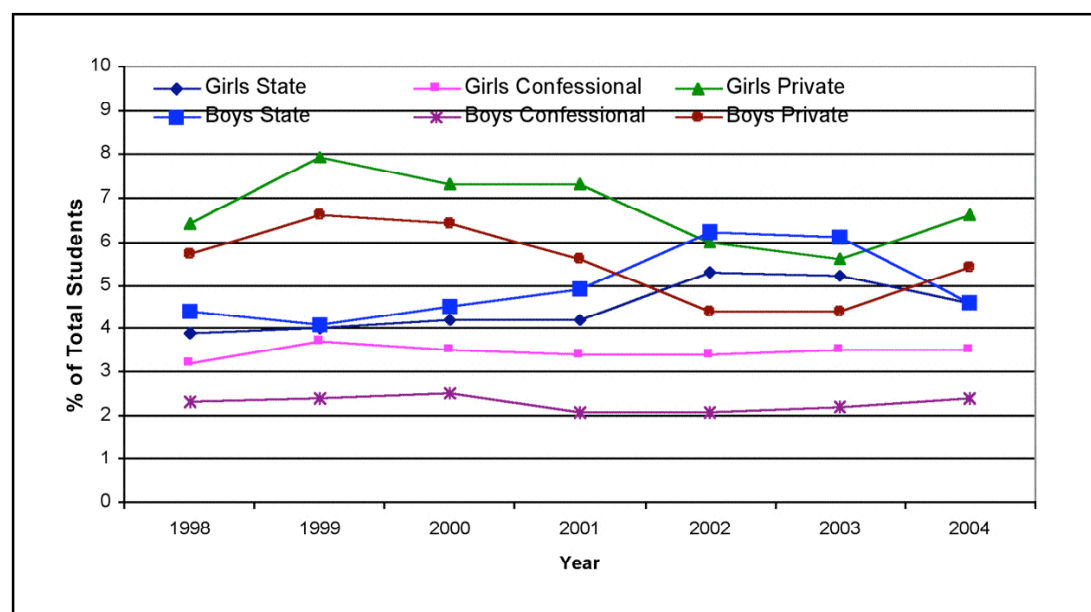
3.13.6 Scoring Distinction in Different Types of Schools (S/P/C) by Gender



3.13.7 Scoring Higher Credit in Different Types of Schools (S/P/C) by Gender



3.13.8 Scoring Lower Credit in Different Types of Schools (S/P/C) by Gender



The statistics reveal that:

- girls are systematically performing better than boys across all school types although the gap is wider for State schools.
- It is also to be noted that girls from State schools have highest achievement in the higher brackets of distinction.
- As concerns the percentage for higher credit, boys from State schools seem to perform better although girls from the same school type seem to have caught up with them.
- However, the achievement of girls in private schools is also noteworthy because over the first four years of the period under study their performance was comparable with the state secondary schools although it declined heavily in the last three years. This decline was also registered for the lower credit scores. The combined downward pull could therefore not be offset by the slight rise in the distinction range implying that for girls' private schools the performance went downhill.
- The achievement of boys in private school seem to have followed the same trend as that of girls
- Compared to this, girls' performance in confessional schools was remarkably stable in all categories being considered. The same pattern is more or less maintained for boys from confessional schools.

Chapter 4

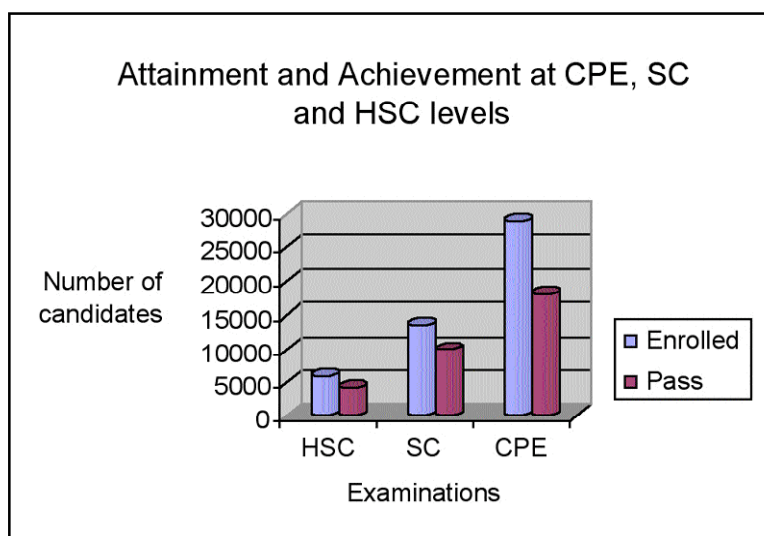
Higher School Certificate Results

4.1 Background

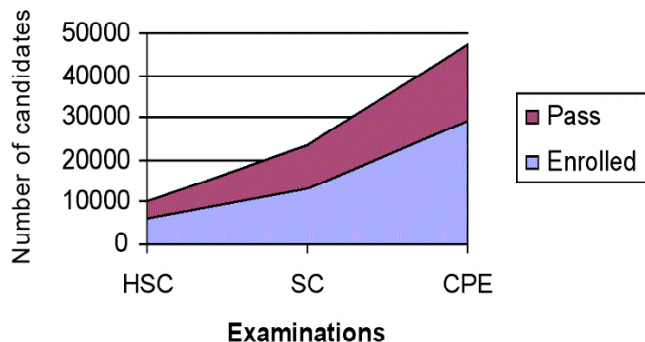
The Higher School Certificate (HSC) marks the end of seven years of secondary schooling in Mauritius and two additional years after SC Examinations. Students must take a minimum of two “A” levels subjects and two subsidiary subjects, one of which has to be compulsorily General Paper. The eligibility criteria for taking up a subject at HSC level is a credit grade, that is, a minimum of grade 6 at “O” level. However, the overall criteria for a candidate to be eligible for admission to HSC has varied from school type. In state schools, 4 credits are officially required but in some private schools and even in some state schools, 3 credits may qualify the candidate provided he/she takes up the School Certificate once more to improve the results.

The centrality of HSC examinations and achievement must be understood in terms of the admission criteria at the university which is two “A” levels. For many students the HSC not only represents access to tertiary education but also a relatively better opportunity to enter the job market.

The average number of students sitting for SC examinations is 13,468 per year as compared to 6003 for HSC. Out of an overall pass rate at SC which is equivalent to 73.5 on average, only 9,899 are eligible for admission to HSC. For diverse reasons relating to the quality of results, re-sits, non availability of subject combination or mere access to schools or economic consideration, only 6003 take part in the exams. Out of the 6003, only an average of 70.3% clear the HSC examinations. If the process of selection is depicted graphically, the following is obtained:



Filter Graph representing attainment at CPE, SC and HSC

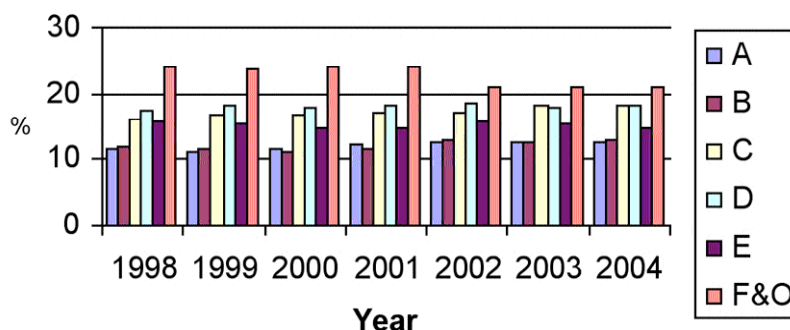


It is therefore not wrong to assume that out of the 29,000 or so students who initially start at the CPE level, only 6,003 make it to the highest academic ladder and there is a further funelling down to only 4,220 which represents a percentage 14.5% of students who make it successfully to HSC. The situation is alarming insofar as out of each cohort of CPE students only 14.5 % will complete their secondary education successfully. The trend is very similar to the one observed in Mauritius in the 1980s where it was statistically demonstrated that, out of 10 children who get enrolled in primary schools, only 1 successfully completes HSC (10%). **Although investment in education has**

substantially increased over the period neither has the quantity and quality of achievement improved significantly as shown in the following sections.

4.2 General performance Across Subjects (in Percentage)

Achievement at the level of Individual Subject Entries

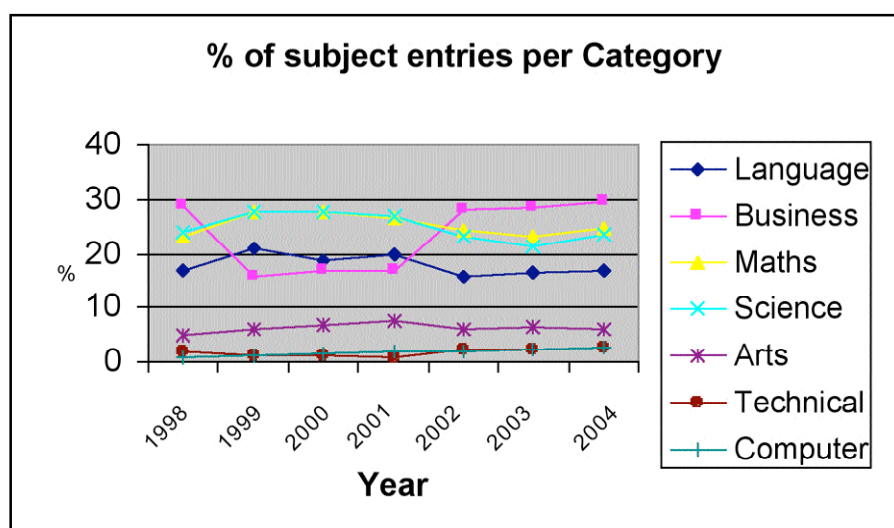


The above table shows the performance in terms of the individual subject entries and, as such, represents the performance of students in individual subjects. The interpretation is as follows: Out of the total subject entries for 1998, for example, 11.4% scored an A, 11.9 % scored a B and 16.1 % scored a C and so on. This is indicative of the general performance insofar as it reveals the trend irrespective of subjects only and does not show the fluctuations across subjects. It is also observed that there has been a slight improvement in terms of the % of F&O but **still more than 20% of entries do not make it to "A" level**- a worrying statistic from both an economic and a pedagogical perspective. If we assume that there is

- an equal percentage of high and low achievers
- an equal number of subjects which are either heavily biased towards high/ low achievement to balance out the distribution, we conclude that:

for every 5 students who sit for an “A” level paper 1 student does not make it to the “A” level standard. The troubling trend may mean that each candidate who takes part in the HSC exams has 1 out of 5 probability to earn an “O” level in a main subject! It would be interesting to map out the economic wastage which occurs in terms of number of hours spent in study, teacher’s inputs, infrastructure etc, if one considers that part of the output of educational investment is measured in terms of educational achievement.

4.3 Student Population Distribution Across Subject Streams



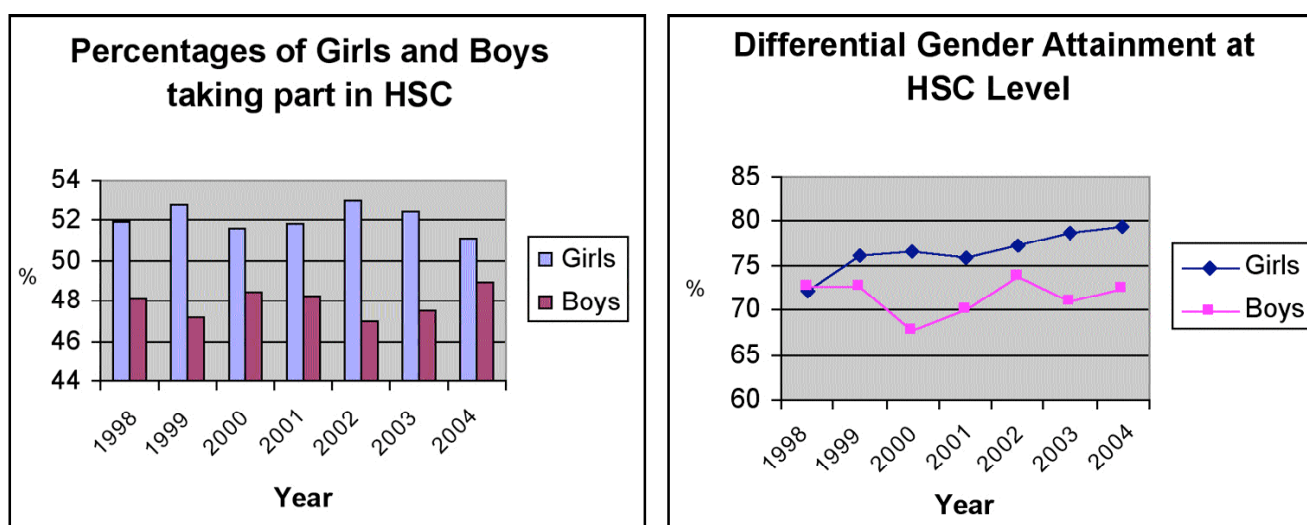
The above table gives the break down in terms of the relative popularity of subjects streams among students. Streams, here have been devised much on the same line as at the SC level with French, English grouped as Languages, Economics, Accounts, Business studies pooled under the common heading of Business subjects, Technical Subjects referring to Design and Technology, Food and Nutrition, Textiles and Fabrics.

The statistical patterns produced highlight on the one hand, the relative stability of the % of students taking specific subject groups except for Business Studies subjects which registered a dip of around 10% points over the period 1999 to 2001 and on the other hand, **the relative ineffectiveness of efforts to boost entries in science subjects and computer studies.** The stability at HSC level naturally follows similar patterns produced at School Certificate level. The % of students taking Maths will be tributary to the fact that science is compulsorily combined with Maths taken at “A” level and often seen as a “natural” choice for Economics also especially in high performing schools.

In Mauritius, the notion of subject streams stands prominently as a peculiar feature of our educational landscape to the extent that students are compelled to specialize early in subject streams such as those mentioned above. Except for a minority, it does appear that most students conform to the streams sometimes due to constraints regarding time tabling arrangements or availability of staff. Combination of different streams like languages and science is rarely offered in the schools. However given that the HSC is also a “passport” for university studies, specific subject streams are selected in line with entry requirements in particular fields of study. Among the most common subjects combination, Maths, Chemistry and Physics/ Design and Technology is a favourite for those opting later for medicine and engineering while Maths, Economics and Accounts are chosen for those opting for business fields.

Such a situation stands in contrast with the very notion of providing a broad based and liberal education which seeks to develop in students an understanding of various disciplines and hence, varying worldviews. Combinations at HSC between the Arts and the Sciences is a rare feature and students who wish to take a combination from different streams have often to fight against the current. It is also difficult to refer to “subject choice” insofar, as due of these restriction due to curriculum requirements, requirements to be eligible for scholarship and what the school opts for “en bloc”. Students’ subject choices depend on a range of factors such as their own views and expectations as well as those of their parents, peers and the media.

4.4 Students’ Profile- The Gender Distribution

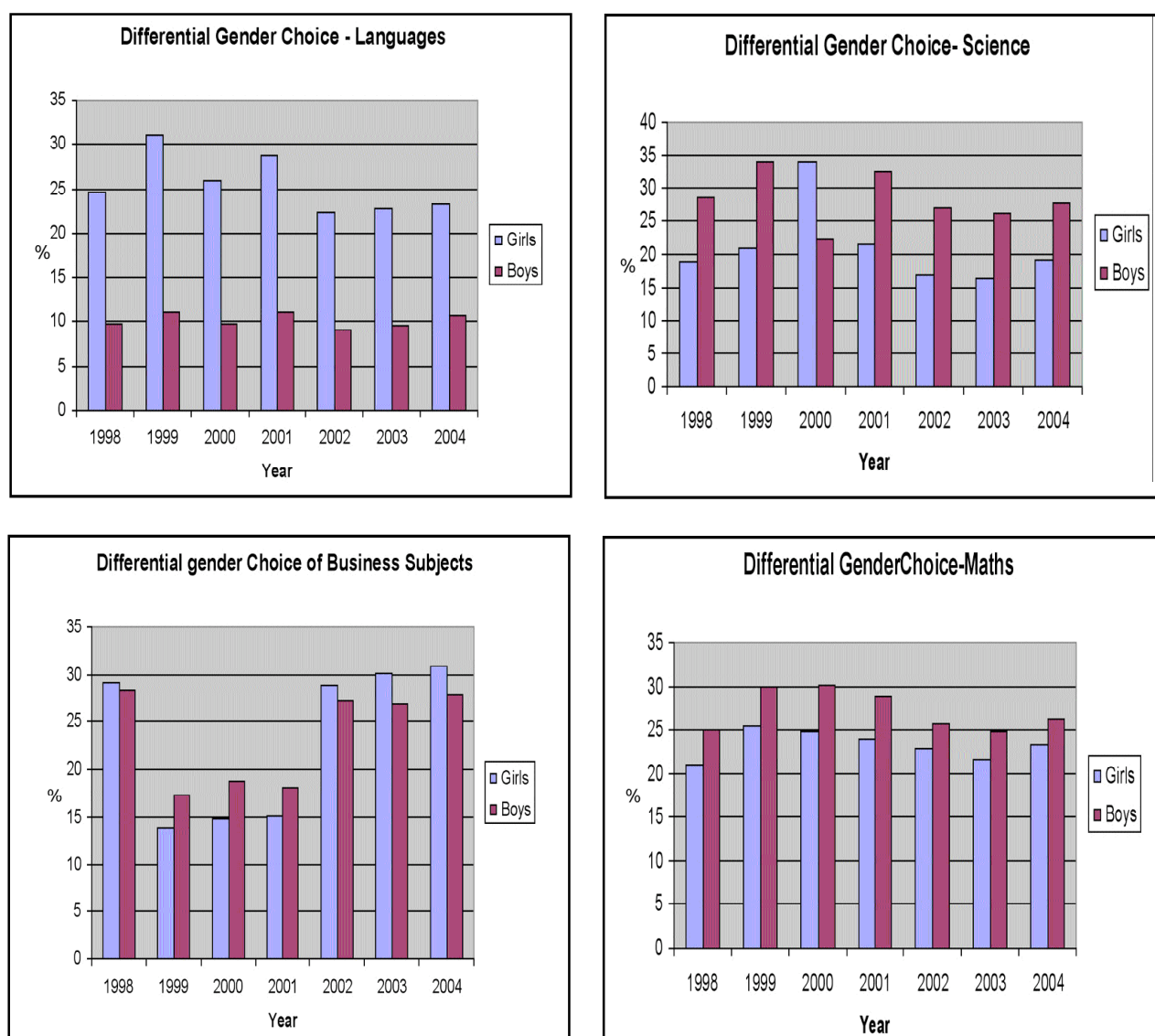


There is a greater number of girls taking part in the HSC examinations than boys; a logical trend given that more girls take part and succeed in SC examinations than boys (see differential gender enrolment and attainment at SC level, pp42). However, the gap has almost doubled from SC to HSC on both enrolment and attainment.

4.5 Gender Comparison in terms of General Performance

	1998		1999		2000		2001		2002		2003		2004	
	G	B	G	B	G	B	G	B	G	B	G	B	G	B
A	11.8	11.0	12.0	11.0	12.8	10.2	13.3	11.0	12.5	12.2	12.7	12.3	13.5	11.8
B	12.4	11.4	13.0	11.4	13.2	9.6	13.0	10.2	13.2	12.4	13.2	11.6	14.0	11.7
C	17.3	15.0	19.0	15.0	19.4	14.4	19.7	14.6	17.5	16.7	19.1	17.3	19.5	16.5
D	18.7	16.6	19.3	16.6	19.0	16.9	19.2	16.8	19.3	17.6	18.8	17.0	18.5	18.0
E	15.8	15.8	14.9	15.8	14.4	15.1	13.9	15.2	15.9	15.4	15.1	15.2	14.1	15.3
F&O	22.5	25.4	19.9	25.4	18.9	29.2	19.3	28.5	19.6	22.0	19.4	22.9	18.8	23.4
Abs	1.5	4.8	2.0	4.8	2.4	4.6	1.8	3.8	1.9	3.7	1.6	3.7	1.7	3.3
Total	100	100	100	100	100	100	100	100	100	100	100	100	100	100

4.5.1 Differential Gender Choice across Subject Categories

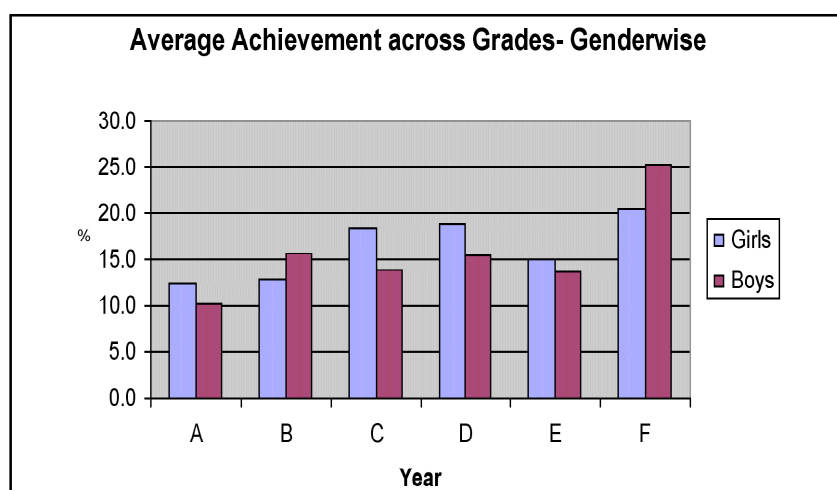


- The pattern observed at CPE level showing a higher percentage of boys sitting for the examinations is interrupted at the level of SC with 51.2 % of girls compared to 48.8 % and the predominance of girls not only persists but also is accentuated at the level of the HSC as shown in the table above.
- A further break down in terms of gender distribution of subject groups reveals that there is marked discrepancy in terms of the % of boys and girls taking at least one language or on average around 22% of girls taking part in HSC examinations choose at least one languages, whereas the figure for boys is only around 8%. Over the last few years however, there is a slight indication that the gap is closing although the difference remains substantially significant.
- This is in sharp contrast to the trend in science where more than 27% of boys on average take at least one science subjects whereas only on average 20% of girls opt for at least one science subject. The trend has fluctuated and overall it can be seen over the past years there has been a slight decline in the number of students taking at least one science subject overall but still the 10 percentage point gender gap has been more or less maintained. Given the importance and employability perspective offered by the subject options taken at HSC, the data would tend to explain to

a certain extent the gender pattern at the level of employment and university entrance. Enrolment in the university in science and technical subject is still very highly male dominated.

It does appear that girls low participation rate in science subject is a shared characteristic of African countries as highlighted below:

“Inequalities between girls and boys participating in science education increase at the post-primary level. Whereas at the primary level, science education is often presented in an integrated manner, specialization comes with secondary education.” (Scientific, technical and Vocational Education of Girls in Africa, 2001).



In terms of general performance, based on total individual subject entries, girls have consistently, over the seven year under study, outperformed boys. What is to be noted also is the lower % of girls in the lowest performance brackets and % of failure irrespective of the subject taken.

The table below gives an indication of the gender differential performance and the significant gap at the average level as highlighted.

Girls higher average achievement at A level irrespective of the subject area is a natural follow up of the higher pass rate of girls despite the fact that there is a tendency for the gap to decrease in the past years.

4.5.2 Gender Differential achievement

Girls-Boys	1998	1999	2000	2001	2002	2003	2004	Average
A	0.9%	1.9%	2.6%	2.2%	0.3%	0.4%	1.7%	1.4
B	1.0%	2.6%	3.6%	2.8%	0.9%	1.6%	2.2%	2.1
C	2.2%	4.3%	5.0%	5.1%	0.8%	1.8%	3.0%	3.2
D	2.1%	2.5%	2.1%	2.3%	1.7%	1.8%	0.5%	1.9
E	0.0%	-0.9%	-0.8%	-1.3%	0.5%	0.0%	-1.2%	-0.5
F&O	-2.9%	-7.7%	-10.4%	-9.2%	-2.4%	-3.5%	-4.6%	-5.8
Abs	-3.3%	-2.6%	-2.1%	-2.0%	-1.8%	-2.2%	-1.6%	
Total	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	

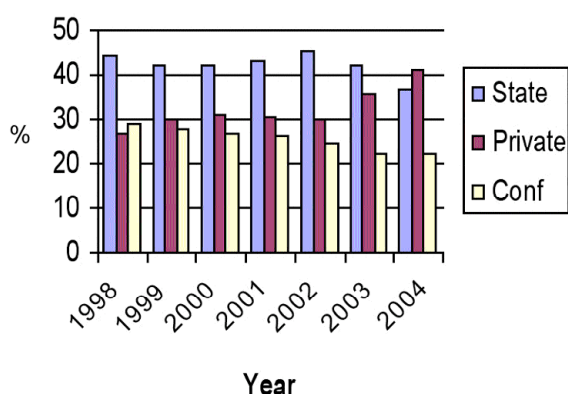
At HSC level, the data seems to confirm the hypothesis **that girls have a consistent lead across all higher grades throughout the 7 year period**. Though one can surely expect subject wise variations, it is clear that similarly to the experience of many countries around the world and specially the UK, girls are outperforming boys catching up on years of discrimination against girls in terms of enrolment and attainment.

4.6 Distribution of students Across School Type

Absolute figures

YEAR	State	Private	Conf	Total
1998	2752	1661	1818	6231
1999	2777	1958	1828	6563
2000	2767	2044	1788	6599
2001	3022	2149	1859	7030
2002	3251	2159	1793	7203
2003	3476	2935	1829	8240
2004	3028	3378	1792	8198
Total	21073	16284	12707	50064

School Type Distribution of HSC Candidates



Contrary to SC level, at HSC level state schools account for on average for 40% of the total entries. It can be argued that more state schools offer seats for HSC as compared to private schools given that logistics and staff are financed by the government whose policy to increase access at HSC level has intensified over the past five years. However, one cannot deny that the government has been substantially financing and upgrading laboratories in private schools. This explains that the number of candidates from private schools is on the rise at

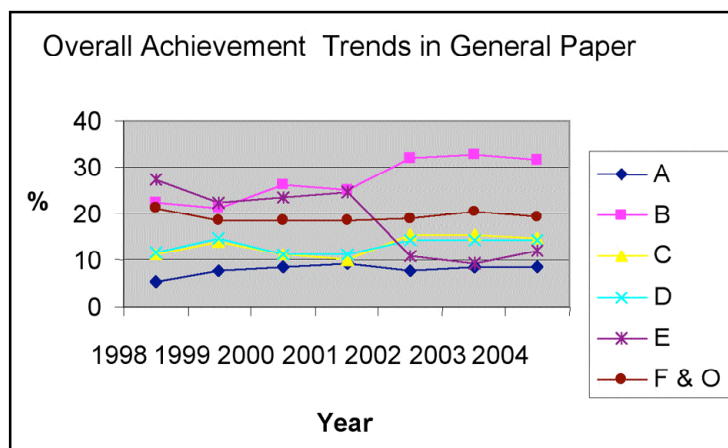
the detriment of the other two types of schools. Such a phenomenon could also be partially explained by the fact that facilities offered by the government to both private schools have been taken advantage of to upgrade infrastructure and recruit staff in order to service HSC courses. However, the other side of the coin has also to be considered given the fact that the private schools enjoy greater flexibility regarding admission criteria to HSC schools in terms of accepting a Pass in English and in main subjects. Indeed, the higher failure rates which are registered for a number of private schools at HSC tend to reflect to a certain extent the extra leeway regarding entry requirements for same.

4.7 Subject -Wise Performance

4.7.1 General Paper Overall

The General Paper examinations are taken by all students and qualifies them for a Higher School Certificate. Technically only 30% of marks are allocated for the use of English language and hence achievement in General Paper cannot be expected to reflect mastery of English. The remaining 70% of marks are assigned to higher order thinking skills of analysis, evaluation and synthesis and also content mastery in

terms of knowledge, understanding and application. Analysis of the achievement pattern over the seven year period reveals significant improvement at the level of grade B with a corresponding drop for Grade E while there is remarkable stability at the level of grades A, C and D. At the beginning of the period under study, 27.6% of students taking part in the examinations were scoring either A or B but in 2004, nearly 40% of students were doing so.

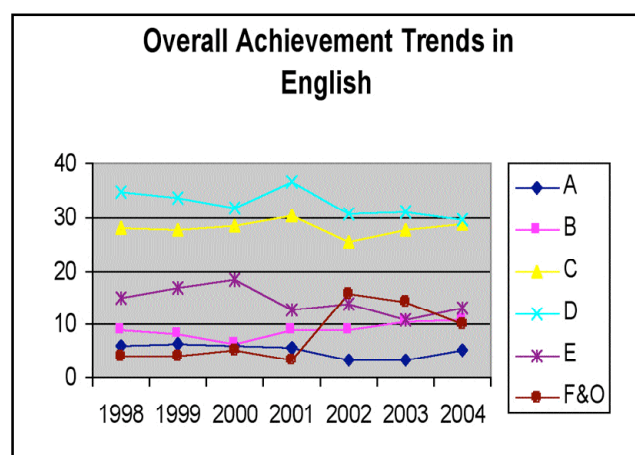
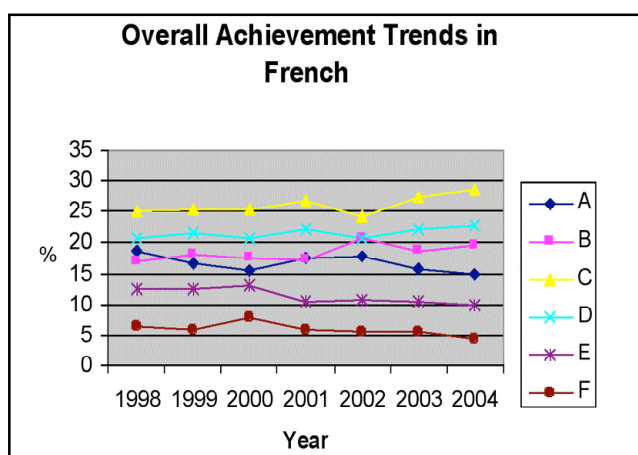


GP is not strictly speaking an English paper though it is taught in schools by English teachers and despite this, the examiners reports have repeatedly pointed out language weaknesses as below:

“..while their English is often inaccurate and its style tends to reflect French usage... The failings in English have been regularly stated in these reports and one cannot say that there has been a marked improvement over the years...” (Examiners Report: 1998)

Students' performance in French language at HSC level follows the same trend as at CPE and SC with low levels of failure and a high percentage of students, on average 35% of students, scoring A and B grade. Such figures are comparable only to the achievement patterns in General Paper. However, it is to be pointed out that the similarity is only at the level of the higher end of the distribution because for General Paper the distribution is heavily tilted at both ends whereas for French the distribution is positively skewed.

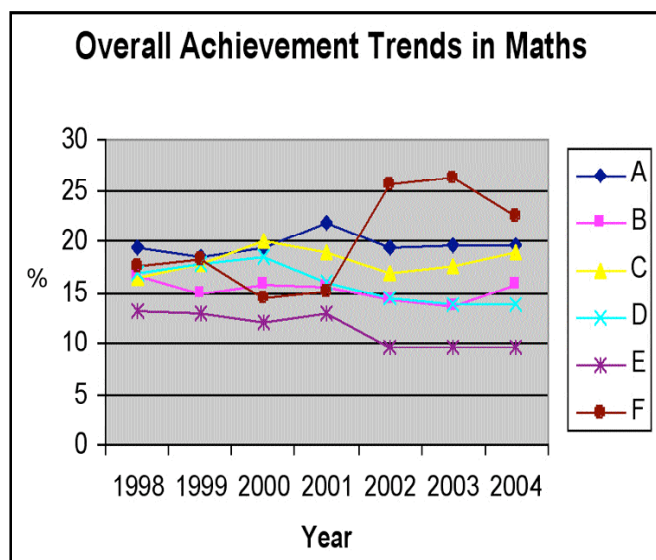
4.7.2 French and English



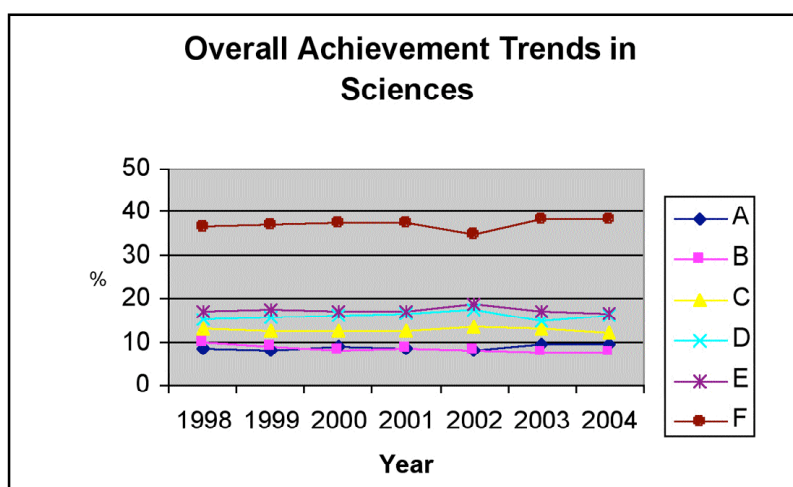
The English paper at HSC level involves purely the study of literary texts unlike French which also includes grammar and comprehension. The distribution is heavily clustered around the middle with on average more than 55% score either C or D. One third of the number of students invariably score a D grade. Achievement in English is below average with however low levels of failure compared to other subjects. While Examiners' report highlighted the sound knowledge of text, they also drew attention to the clumsy sentence writing and poor syntax and punctuation.

4.7.3 Maths

In terms of A grade, Maths registered the best performance over the seven year period with an average of 19% of students scoring A and 34% scoring either A or B.



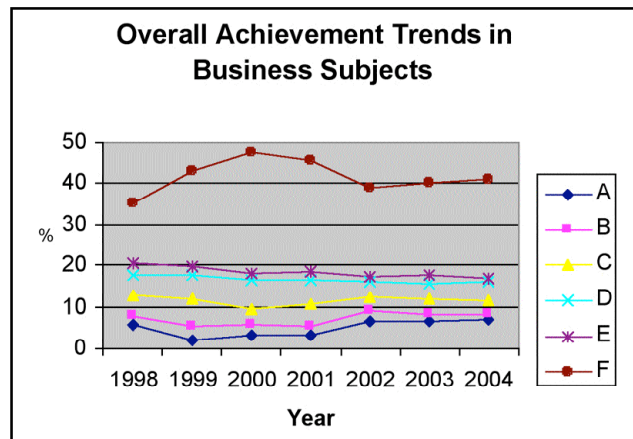
4.7.4 Science



The most striking observation from the data generated for science relates to the high percentage of students, an average of more than 35%, scoring either F or O. Only 16% on average can aspire to either to an A or B in science subjects. Among the science subjects, Biology is the least scoring subject and probably pulls down general achievement in science. The general explanation given relates to the heavy bulk of the Biology curriculum at A level and probably the students' perception of biology being a "soft" science and may have unrealistic expectations of it. Examiners' report have brought to attention the fact "*candidates did badly because they lacked knowledge, rather than what they wrote was either incoherent or irrelevant.*" (Examiners' Report, 2001)

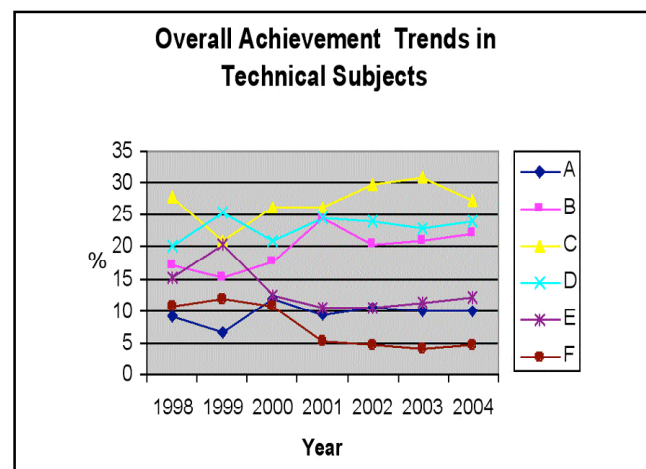
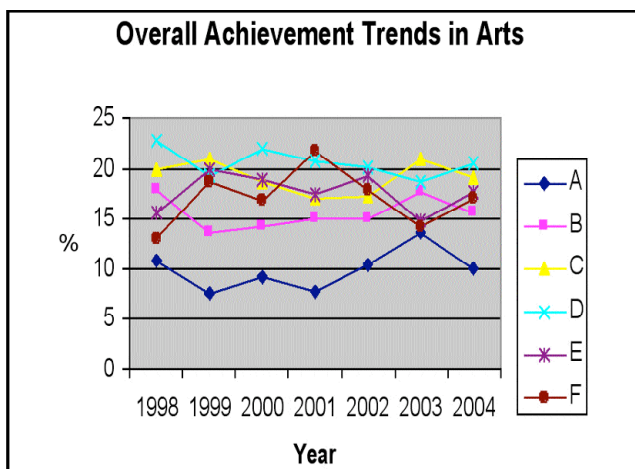
Science subjects appear to be quite a popular subject despite the fact that the failure percentages are high above average and all other grades tend to cluster around 10%.

4.7.5 Business subjects



This particular subject group has displayed the poorest performance insofar as in 1999 only 2.2% scored A grade and on average over the seven year period, not more than 15% scored either A or B. The distribution is heavily tilted at the lower end with 55 scoring a maximum of E. However, it has to be highlighted that these figures are not evenly distributed among the various subject areas in the group. The grades for Principles of Accounts are superior compared to Business Studies and Economics. Every year, 30% of students taking part in both of the Business studies and Economics examinations make it only to “0” grade. This reinforces the public perception that within a particular category of subject, some may be construed as “soft” subject or, because they are scoring subject, they are perceived as easier options.

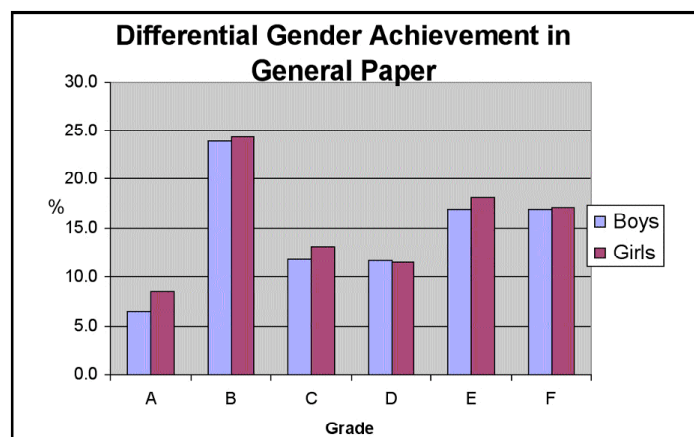
4.7.6 Art and Technical Subjects



Students’ achievement in Art is typically better overall than the other streams and comparable to that of technical subjects except for grades O & U where the percentage is higher for technical subjects. For both, marks are more or less evenly distributed among the different grades with maximum cluster around the average grades. The fluctuations over the years also follow a similar pattern. Achievement in Arts and Technical subjects marks a departure from the trend noted in what is normally perceived as purely academic subjects such as science, business etc. The overall picture which emerges is one that is more balanced and a graph which is clustered around average grades. What primarily differentiates these two subjects at A level from other mainstream subject is the assessment. Subjects with integrated elements of continuous assessment seems to give more opportunities to students to demonstrate their acquired skills than a closed-ended examination process. The benefits of continuous assessment are well established now in the educational literature and the achievement pattern does suggest that achievement trends are more satisfying where there are possibilities to measure achievement over a period of time rather than at a point of time.

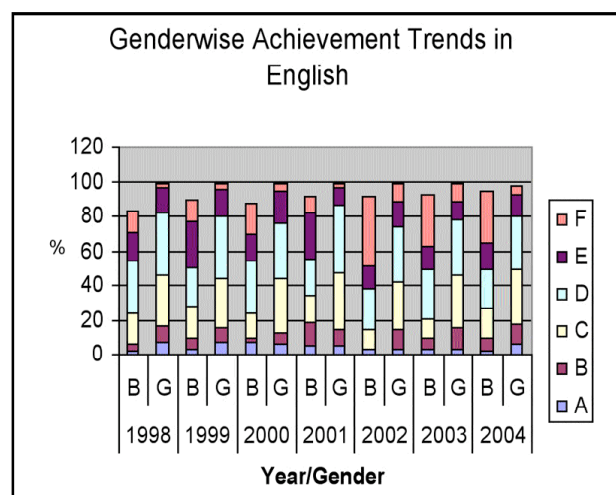
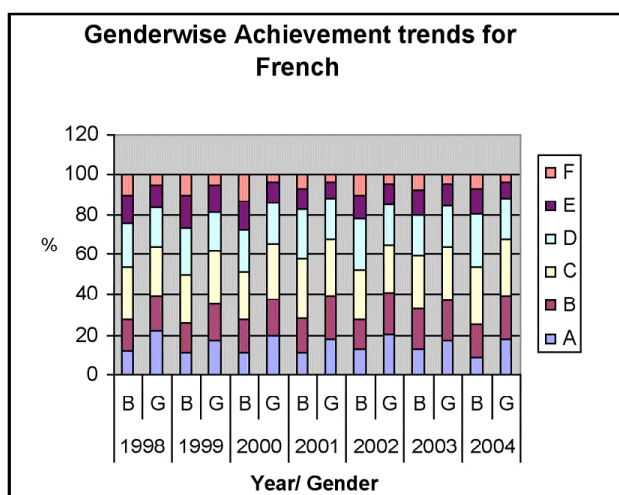
4.8 Gender Distribution on a Subject Wise Comparison

4.8.1 General Paper



- The results for boys and girls are overall comparable even though girls' performance is slightly better in the higher grades (A and B).
- There has also been a marked change in percentage of students scoring the lower grades for both boys and girls. Indeed, over the last three years, the percentage in E grade has been halved and the change absorbed at the level of grade C and D. Keeping in mind that the General Paper assesses ability to use language and to interpret and analyse information, it does seem odd that boys would fare equally compared to girls while in other languages girls have a definite advantage. Does this mean that to some extent boys may be scoring higher because their analytical and evaluative skills are better?

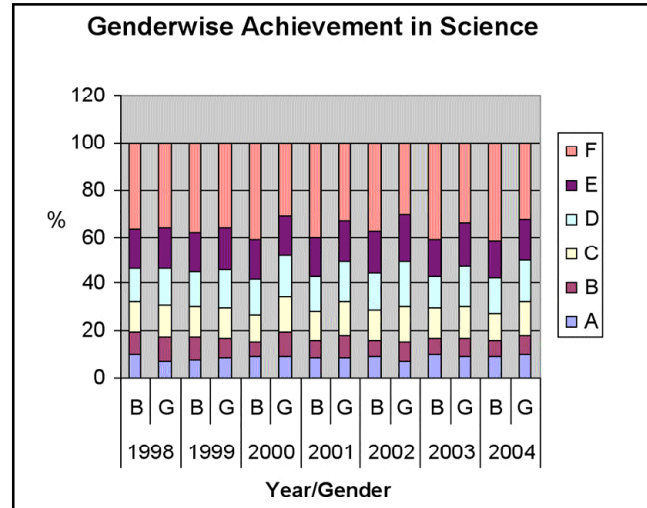
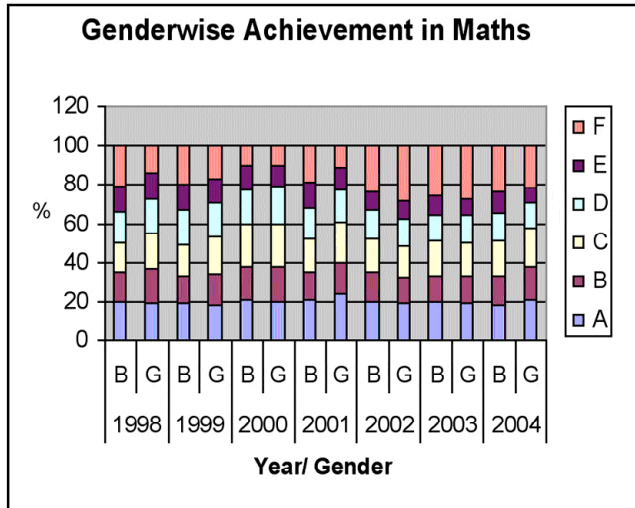
4.8.2 French and English



- The achievement in English and French at A levels are poles apart. The data reveals a clear gender differential in terms of achievement with girls outperforming boys in terms of grades "A" and "B" for both subjects. The distribution is heavily clustered around the modal score which is "C" and "D" for French and English respectively. Girls' lead in French at HSC level is even more pronounced given the larger number of girls taking part in the French A level examinations. Despite the fact that English records the lowest % on grades A and B across all subjects in the main stream. Till 2001 the failure rate is one of the lowest. 2002 is a turning point for boys with failure rates shooting up from 9.7% to 39.5 % while that of girls has remained more or less stable.

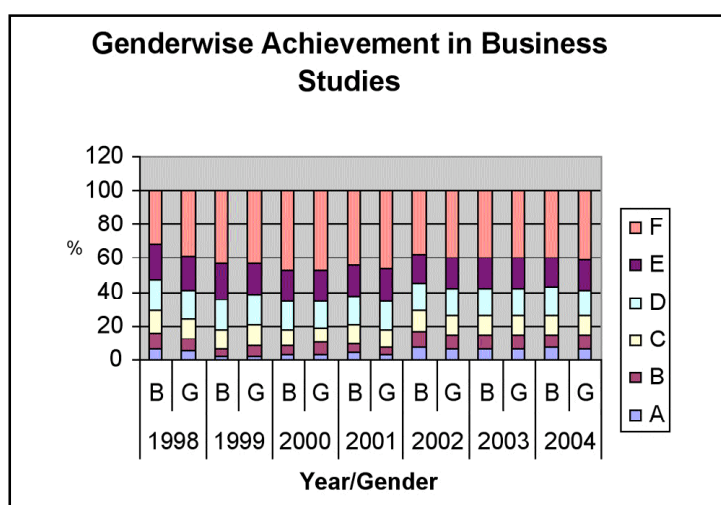
- The discrepancy with French is even more puzzling because the French paper contains certain similarities when it comes to writing argumentative essays and answering comprehension questions. The issue here relates to whether by studying a language a student acquires only the skills for that particular language only or whether generic language skills are acquired in the process?

4.8.3 Maths and Science



- There is no significant gender differential regarding performance in Maths. The data shows a more or less even distribution.
- As from 2002, there has been a significant increase in the failure rate for both boys and girls. Maths at “A” level is a popular subject because it is compulsory for a number of combinations. Achievement in Maths at HSC level normally involves a period of 4 year study as from form 3. An interesting feature of the data for Mathematics is the higher percentage of students in the “A” grade category till 2002.
- The gender achievement trend observed for Maths at CPE and SC level does not persist at HSC Level. Plausible explanations could include the hypothesis that only students who have mastered the minimum required mathematical skills do proceed to the higher level. That is why for both boys and girls the difference is not statistically significant. An interesting trend relates to what has been happening to % failure for girls after 2002 and to analyse whether 2002 really marked a decisive break and why.
- Overall, the general trend shows comparable performance between boys and girls although over the seven year under study boys took the lead more frequently than girls. However, care must be taken to cautiously interpret the findings because the categorization of all sciences does not provide for within the category fluctuations.
- One interesting trend has been the decreasing percentage of girls failing as compared to boys. For the latter, the rate has consistently increased from around 36% at the beginning of the period to 42% at the end of 2004.
- For both girls and boys the distribution is heavily skewed on the lower side of the scale. The data can possibly highlight the beginning of a reverse trend in terms of gender differential achievement in science. There are very definite signs of girls matching the performance of boys in the A&B category while at the same time clearly overtaking boys in the lower performance brackets.

4.8.4 Business Subjects



- In business subjects, achievement in the upper brackets is one of the lowest across all subject categories apart from English although the failure rate is much higher for the first mentioned.
- For both boys and girls, there is constant trend of around 40% of students not clearing the examinations and more than 30% score either D and E. There does not seem to be a significant gender difference in terms of the achievement pattern for business subjects.
- There does appear to be a disquietingly consistent trend in low achievement which needs to be carefully looked into especially in view of the large number of students who opt for business studies at A level. Much of the analysis about this trend relates to students' ability to develop higher order thinking skills and the specificity of the subject as requiring cognitive dispositions of a certain type. But are these not related to the pedagogical skills of the teachers and the provision made for in- service training when subjects are introduced in the curriculum? What follow up actions are taken to help teachers deal with learning difficulties in that particular area?
- Analysis of some examiners report (1998, 2000, 2002, 2003) highlighted candidates inability to answer higher order questions especially when questions required them to "evaluate" as illustrated in the comment below:

"the basic knowledge was for the most part, sound, but was frequently left at an elementary level with a restricted attempt to develop the idea in the way indicated by the question."
(Examiners' Report, 2000)

It was further added that candidates must not only present cases for or against but should learn to assign weights to the arguments presented and to judge the validity of these arguments as exemplified by the following:

"In order to gain high marks in questions that ask for a discussion, candidates need to present more than one side of an argument and then come to a conclusion. They should also be prepared to state their own view of the matter." (Examiners' Report, 2003)

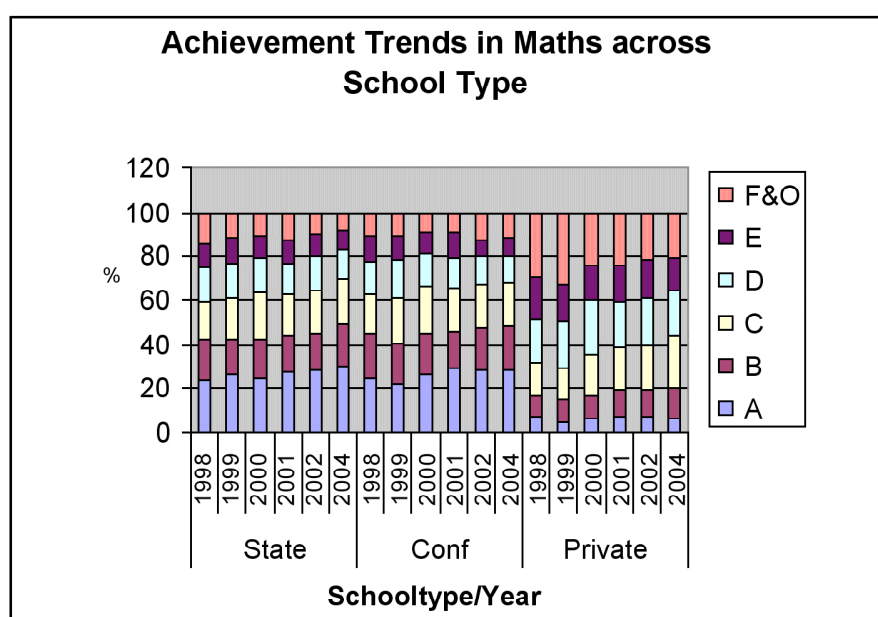
4.9 School –Wise Performance *

4.9.1 Rationale

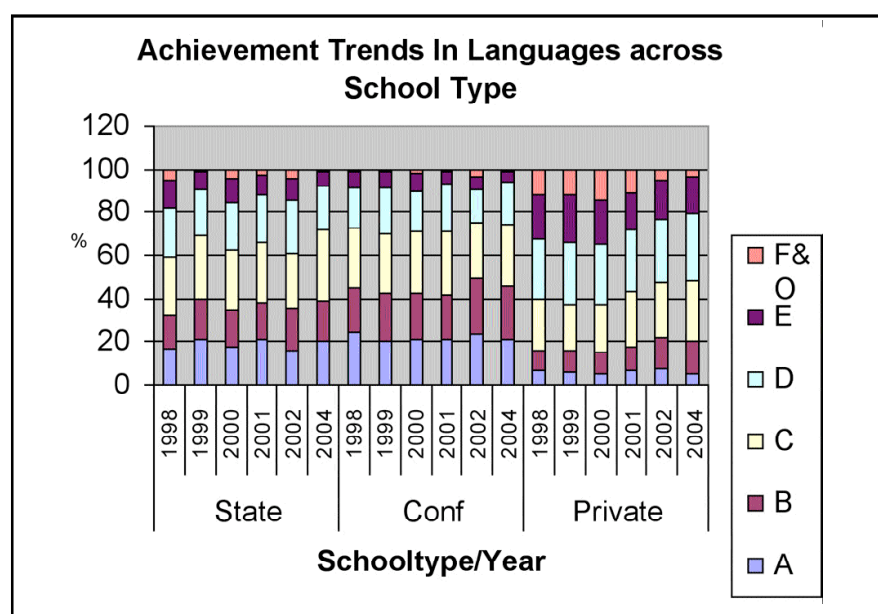
The same categorization as for SC has been used in terms of State confessional and Private schools. However, a further refinement was brought at the HSC school wise analysis. Schools for each category were further distinguished along the lines of high/ low achieving schools. Their overall pass rates were used as a criteria to classify the schools within their respective categories.

Two levels of analysis have been carried out. Firstly, the first categorization was used as a basis for comparison which gives us “general” view. However, given the reality of our system and the need to investigate for gaps within the same category of schools, additional sets of tables have been generated displaying the variation within one particular school type.

4.9.2 Maths



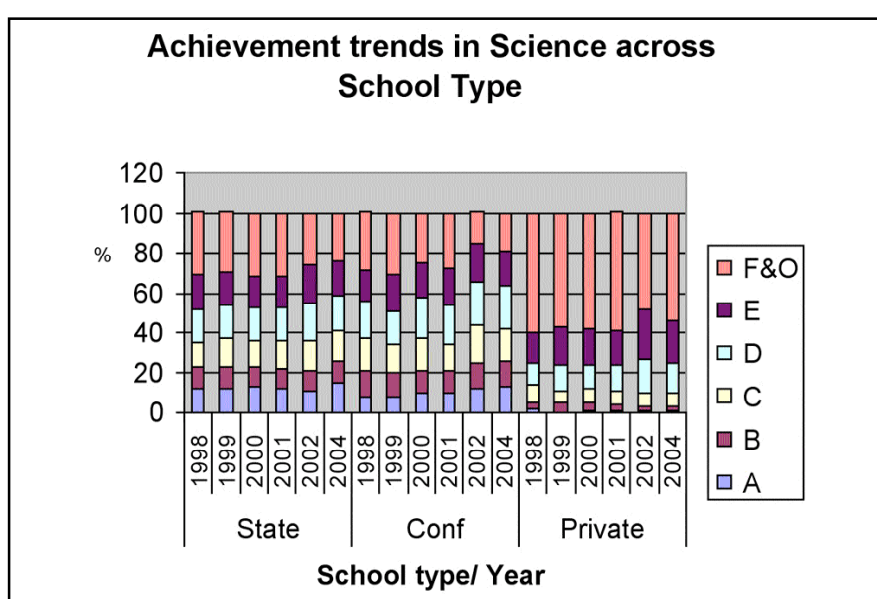
4.9.3 Languages



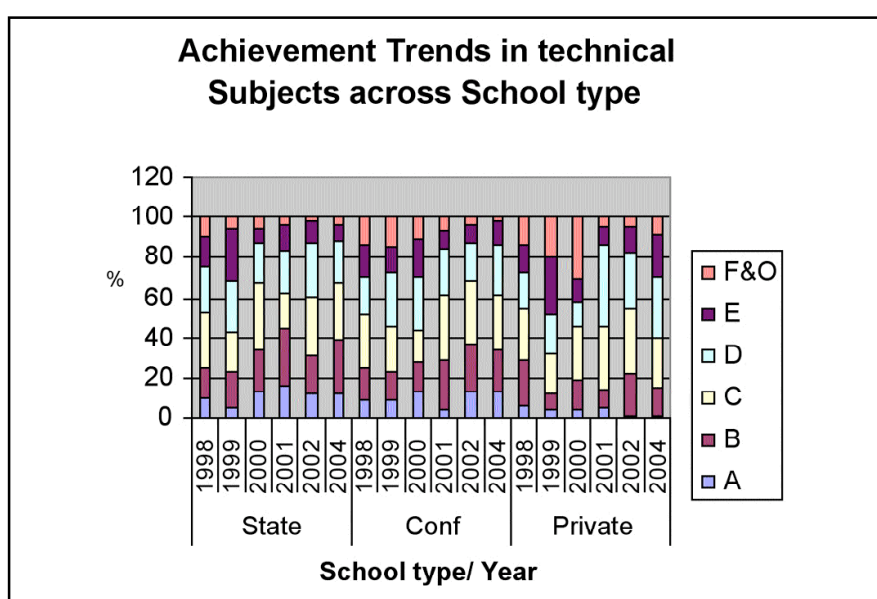
There is a marked discrepancy between the achievement in state and confessional schools as compared to private schools. Though one can easily argue that there are within category fluctuations and that it may give a distorted picture of the real achievement profile, apart from a few schools with high achievement profile, most private schools fall into the average or low achieving brackets. This is accounted for, by the entry level of their students in Form I. Students showing the best performance at CPE level are normally channelled to state and confessional schools. This reinforces the idea of academic programming and irreversibility. Furthermore, vacant seats in state schools are filled by best candidates from private schools leading to impoverishment of results.

With respect to languages, confessional schools have a consistent though small lead over state schools whereas the reverse is true for mathematics.

4.9.4 Science

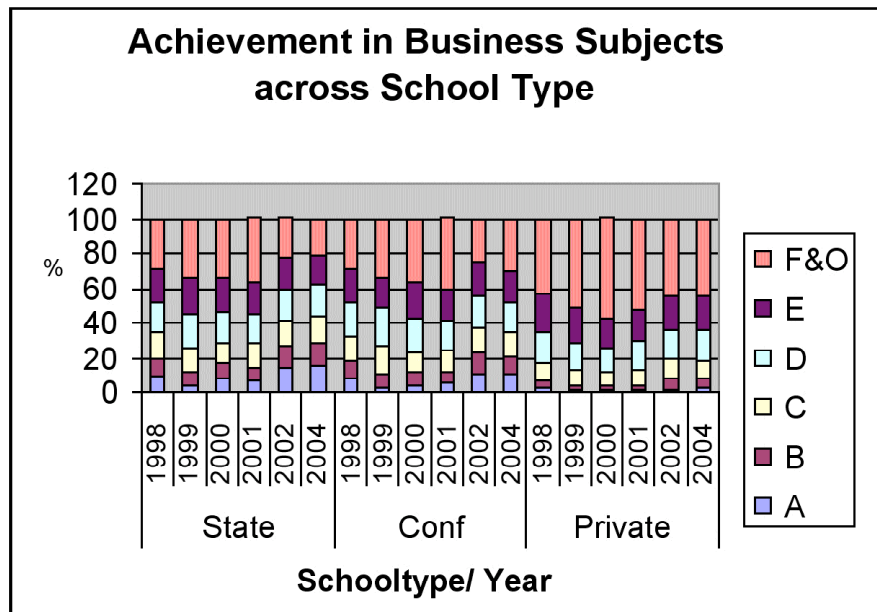


4.9.5 Technical



The data for science and technical streams confirms the trend observed in other areas. However the striking statistics regarding the school achievement gap for science cannot be overlooked. The average for the private schools is around 1% and a failure rate that is consistently above 50%. State schools perform better although the failure rate is higher for state schools than for confessional schools. Further analysis has been made in terms of the within category distinction and is considered in the next section. For technical subjects, the distribution is less skewed across all school types and the gap observed for science is narrower.

4.9.6 Business subjects



The above data reveals similar patterns as for science with the relatively poorer performance of the private schools in the higher brackets. However, all schools have registered over the years high rates of failure for business subjects, which have rarely fallen under 30% for any school type though the State schools have clearly, in general fared better than Confessional schools. The data therefore confirms the SC trends that Business Subjects apart from Principles of Accounts are one of the less scoring subjects and that serious consideration must be given to finding means and ways to improve student achievement. In the light of industrial development, employability perspective and the emergence of the business sector, achievement in these subjects become important. There is an urgent need to revisit teachers' professional development and accountability for achievement.

It has been highlighted when analyzing the results for business studies at SC level that, following the introduction of the subject in mid-1990s, no long term professional development for teachers were held to support teachers. It does appear, from teacher's point of view, that low performance in this field is the result of a combination of factors ranging from teacher's own confidence in teaching as well as students perception that it is a relatively easy subject as compared to science. The question however here relates to the continuing downward trends observed in a number of subjects and whether there has been a concrete effort to address them through workshops with teachers. The MES has recently started this practice in some core subjects but the statistics reveal that there is a need to regularly extend this practice over the entire spectrum of subjects.

4.10 Achievement on a School Type & Subject Wise Basis

SCHOOL	Princ	SCHOOL (SCP)	A	B	C	D	E	Fail	Total
High	MATHS	State	39.8	18.0	16.4	11.2	6.9	7.8	100.0
		Conf	38.5	20.3	17.5	11.0	6.3	6.3	100.0
		Private	13.6	17.2	21.9	21.1	12.1	14.1	100.0
	Science	State	19.5	13.9	16.3	16.3	14.0	19.9	100.0
		Conf	15.3	15.2	19.6	19.7	15.9	14.3	100.0
		Private	3.1	6.6	12.3	18.4	23.3	36.3	100.0
	Language	State	33.5	20.5	26.1	13.8	4.5	1.6	100.0
		Conf	33.8	24.1	25.3	12.6	3.4	0.8	100.0
		Private	9.9	19.2	35.0	24.7	8.9	2.3	100.0
	Technical	State	17.4	25.8	25.7	19.4	9.3	2.4	100.0
		Conf	15.5	21.3	24.1	21.3	11.7	6.1	100.0
		Private	3.2	24.3	35.2	24.3	10.9	2.1	100.0
	Business	State	20.1	15.5	17.6	16.5	13.5	16.8	100.0
		Conf	13.0	12.6	15.5	16.9	16.9	25.1	100.0
		Private	5.1	11.1	17.3	21.5	19.9	25.1	100.0
Average	MATHS	State	14.1	18.8	21.9	19.4	12.9	13.0	100.0
		Conf	14.4	18.7	22.1	17.8	12.2	14.9	100.0
		Private	7.4	14.8	24.1	23.4	15.0	15.1	100.0
	Science	State	3.2	5.7	12.2	19.0	22.4	37.5	100.0
		Conf	3.9	7.4	14.2	19.5	20.1	34.9	100.0
		Private	0.4	2.9	10.4	16.7	22.9	46.8	100.0
	Language	State	8.6	17.1	29.8	28.4	12.9	3.2	100.0
		Conf	14.1	21.5	30.3	23.1	8.2	2.9	100.0
		Private	3.5	9.9	24.6	34.4	20.6	7.0	100.0
	Technical	State	4.0	16.5	30.3	25.6	15.2	8.4	100.0
		Conf	5.5	17.8	32.9	23.3	12.5	7.9	100.0
		Private	0.0	5.0	14.0	33.0	23.0	25.0	100.0
	Business	State	5.3	8.3	12.9	20.1	21.8	31.5	100.0
		Conf	5.6	9.2	13.3	18.9	19.1	34.0	100.0
		Private	1.6	6.5	12.8	19.2	22.1	37.8	100.0
Low	MATHS	State	12.2	15.4	23.4	19.7	14.0	15.4	100.0
		Conf	6.2	11.6	19.7	21.6	17.4	23.4	100.0
		Private	5.1	9.8	18.7	22.0	17.9	26.5	100.0
	Science	State	2.3	4.4	11.6	17.4	20.6	43.7	100.0
		Conf	0.5	2.3	9.5	15.0	25.6	47.2	100.0
		Private	0.6	2.1	4.9	10.7	17.1	64.6	100.0
	Language	State	7.3	13.8	31.4	28.8	14.1	4.6	100.0
		Conf	6.7	17.2	33.2	29.4	10.6	2.9	100.0
		Private	3.7	12.2	24.5	31.6	19.3	8.6	100.0
	Technical	State	4.6	17.3	32.1	27.8	12.7	5.5	100.0
		Conf	28.6	14.3	14.3	28.6	14.3	0.0	100.0
		Private	1.3	11.7	23.4	28.6	27.3	7.8	100.0
	Business	State	3.9	7.3	13.1	17.2	21.2	37.3	100.0
		Conf	1.7	6.1	10.0	20.7	20.9	40.6	100.0
		Private	1.4	4.8	9.7	17.0	21.7	45.4	100.0
Total			13.8	13.2	18.2	18.4	15.1	21.3	100.0

The table provides a general overview of achievement on a subject basis for high/ average /low achieving schools categorized along the State/Confessional/Private lines. The statistics provide the average comparison over the seven year period to enable a general comparison irrespective of the year-to-year fluctuations.

The categorisation procedure has been carried out along the following lines:

The overall percentage pass rates were used as indicators and among all State/Private/Confessional - the schools with the highest percentage pass were grouped as high achieving and so on.

The basic aim underlying this process was to unveil the within category variation given the fact that achievement may vary significantly across one category. The first set of tables generated reveal the broad picture but there is also the need to compare like with like. **The pitfall to be avoided is not to make sweeping generalization because, on an individual basis, a private school may show better student achievement than a state school.**

4.10.1 Best Achieving Schools

- The data is unambiguous enough regarding students' achievement in high performing schools. **Achievement is comparable between State and Confessional** Schools, though the latter register a lower the level of failure in Maths, Science and Languages. The statistical distribution for high achieving confessional schools seems to be slightly more balanced than that the state schools.
- The discrepancy is substantial between the best performing private schools and the two other school types with, as already established, **the gap being widest for science subjects for both the upper or lower brackets** although for business subjects, the failure rate between confessional and private schools is, on average, the same.

4.10.2 Average Achieving Schools

- Within this category, the data reveals that among average achieving schools, confessional schools, on average, have a slight lead over state schools across all subjects and the lead is strongest in mainstream languages.
- A comparison between high achieving private schools and average achieving state schools places both schools at par. The low percentages in Technical and Science need to be highlighted as well as the similar percentage failure across all three schools in Maths and Business subjects.

4.10.3 Low Achieving Schools

- The data reveals that low achieving schools **outperform even average achieving schools for technical subjects across all school types.**
- On the contrary for academic subjects discrepancy across schools is maintained and even accentuated in science. It is thus established statistically that one of the lowest achievement areas is the “hard” subjects.
- Overall, the statistical landscape produced shows a pronounced achievement gap across school type. However, one must be cautious in the interpretation given to the differential achievement noted. On the one hand, it is hard to attribute a school effect on student achievement given the fact that the school population is not comparable in terms of prior achievement. On the other hand, some schools are overtly advantaged in terms of their “recruitment” quality because they enroll students of higher initial ability/ performance.

Concluding Note

A noteworthy observation relates to the general distribution for State and Confessional schools: whereas it is clear that state schools have the best performance in the Best Achieving school category, the achievement of students in confessional schools are, more often than not, more equally distributed across grades.

If we assume that the students in high achieving State secondary schools reach secondary schooling with a better academic track record than their confessional school counterpart, the intervening variables which explain the difference must be at level of the school.

4.11 Four Tiered Distribution

PrincSub	SCHOOL	SEX	A	B	C	D	E	Fail	Total
MATHS	State	G	41.5	19.7	17.3	10.7	5.7	5.2	100.0
		B	38.2	16.5	15.5	11.7	8.0	10.2	100.0
	Conf	G	34.8	22.3	19.9	11.4	6.4	5.2	100.0
		B	44.2	17.1	14.0	10.3	6.3	8.0	100.0
	Private	G	13.6	18.4	26.8	23.0	11.4	6.8	100.0
		B	13.6	16.7	20.1	20.4	12.4	16.9	100.0
Science	State	G	19.1	15.4	18.2	17.5	15.0	14.8	100.0
		B	19.9	12.6	14.9	15.4	13.3	23.9	100.0
	Conf	G	9.7	14.4	21.3	24.0	17.3	13.3	100.0
		B	22.0	16.1	17.6	14.6	14.2	15.5	100.0
	Private	G	3.2	9.2	14.3	19.0	23.1	31.2	100.0
		B	3.0	5.3	11.4	18.2	23.4	38.7	100.0
Language	State	G	35.2	21.0	26.3	13.0	3.6	0.9	100.0
		B	27.0	18.7	25.2	16.8	7.9	4.3	100.0
	Conf	G	34.4	23.8	25.3	12.7	3.2	0.6	100.0
		B	31.7	25.5	25.3	12.1	4.2	1.3	100.0
	Private	G	12.5	18.7	34.6	24.0	8.0	2.1	100.0
		B	3.7	20.4	35.9	26.1	11.0	2.9	100.0
Technical	State	G	16.7	17.9	29.3	23.6	9.8	2.8	100.0
		B	17.8	29.3	24.1	17.6	9.1	2.2	100.0
	Conf	G	12.5	17.9	24.5	24.5	13.2	7.4	100.0
		B	20.0	26.5	23.5	16.5	9.4	4.1	100.0
	Private	G	6.6	13.1	29.5	39.3	9.8	1.6	100.0
		B	2.2	27.4	36.8	20.2	11.2	2.2	100.0
Economics & Commerce	State	G	20.5	16.2	18.4	16.8	13.5	14.6	100.0
		B	19.5	14.5	16.5	16.1	13.5	20.0	100.0
	Conf	G	11.3	14.0	16.0	16.8	17.4	24.5	100.0
		B	16.7	9.3	14.4	17.2	16.0	26.3	100.0
	Private	G	6.7	11.5	16.5	20.5	21.8	22.9	100.0
		B	4.7	10.9	17.5	21.8	19.4	25.7	100.0

The table above shows achievement patterns at the level of School Type distinguished in terms of High achieving schools and Confessional /State or Private schools, Gender and Subjects.

- For the high achieving category, boys confessional schools have a clear lead across all subjects except the business subjects. The largest discrepancy being registered in Maths where in State schools around 54% of boys score either A or B whereas in confessional schools around 61% do so (the discrepancy being maintained in either A or B grades).
- For girls, the inverse is true statistically. Confessional girls schools have performed less well than Girls in State Schools even in Languages but the most striking observation relates to science when the gap in A grade is nearly ten percentage points.
- The data confirms the wide chasm which exists between, on the one hand, the State/ Confessional Schools and, on the other hand, the Private schools even in the high achieving category.

Chapter 5

General Overview and Analysis of Trends

5.1 Important trends overall

The educational achievement of Mauritian primary and secondary school students has been the subject of unusually intense debate and scrutiny. The data reveals that there has been a general downturn in the level of educational achievement and this has been observed, across subjects, and across core disciplines like Maths, Science and English for the period under study. While overall pass rates improved for some years qualitatively, achievement did suffer a substantial decline as evidenced by the decreasing percentages of pupils scoring top grades in all core subjects and at almost all levels of the education system. It would appear that more than 50% of students sitting for CPE have not acquired the Essential Learning Competencies in either Maths or English. 60% of these students proceed to acquire secondary education and the same pattern is reproduced at the level of SC which could mean that a disturbingly large proportion of Mauritian students are unable to use and apply fundamental mathematical and linguistic skills to situations encountered in everyday life.

However, the real degree of this deterioration cannot be precisely inferred since grades (and not actual scores) were obtained and used for analysis. Despite such a handicap, it is nevertheless evident that since some form of scientific standardization is used every year to ensure that candidates do not get penalized for an exceptionally easy or difficult paper. The standardized scores among candidates, bear a linear relationship to achievement and reflect the accurate percentage in the different categories. It is assumed, with adequate scientific reason, that the system of percentiles normally used for examinations, with such scope, produces a more or less accurate picture of student achievement. Teachers involved in the marking of examinations papers and professionals of the evaluation process itself, have all highlighted the general decline in the level of educational achievement. Though it is true that some degree of variations in the results of examinations and its accuracy in measuring achievement can be attributed to the limitations of the measuring rod itself, the consistently declining trends in the higher grades as compared to the gains in lower grades would strongly suggest, that, even if amends are made for the limitations of the tools themselves, there is little reason to doubt the reliability of the statistical patterns produced.

5.2 Achievement in Maths

Grades in Mathematics at the CPE are generally on the decline with a loss of 15% points over the period of 14 year in terms of combined A & B among passes. The lower end of the distribution has not only absorbed the decline in the higher grades but also the losses at the average level. The % of D & E (representing standardized scores of 30-40) among passes has increased by 20% points (30.5 % in 1990 to 50.6% in 2004- on average it rose by more than 10% points) while failures increased by 5% points. At the level of SC examinations, there is much greater stability of trends across distributions though no significant improvement has been noted. There has been consistently 30%

failure each year with 50% of students making it only to a maximum of grade “D”. Maths is the one of the subjects where boys lead by at least two percentage points in the higher scores brackets. A comparative analysis with other countries at similar development levels has so far not been carried out given that Mauritius did not participate in the 2003 Trends in Mathematics and Science Study (TIMSS) which included 46 countries. It is recommended that for purposes of monitoring the progress of educational achievement, Mauritius participates on a regular basis in international studies.

At HSC level students’ achievement in Maths has been subjected to little fluctuations and around 35% have consistently scored either grade A or B. The data also confirms the gender disparity in Maths though boys’ lead in mathematics is less significant than girls’ lead in languages. However, the gender disparity in Maths is more or less even out at HSC level, whereas in Languages, girls have maintained, if not reinforced, their lead throughout.

5.3 Achievement in Languages

Achievement in the two core languages, English and French demand immediate consideration on account of the low student achievement at the end of both primary schooling and intermediate secondary schooling. The scope of the problem has to be understood in a context where in English which is the official medium of instruction in our schools. At the secondary level achievement in English has hovered around 12.8 % in the higher performance brackets and most of the good results are confined to the state or confessional schools. At the primary level, 42% of students taking part in the English examinations score a maximum of “E” grade, which is indicative that at most only 66% of the essential learning competencies have been mastered. It is no surprise, that at the SC level, achievement in English has remained low and those students who have scored a D or and E at the end of their primary education will reproduce the same pattern at the SC level. We also come to the inevitable conclusion that there is no significant change/ improvement brought about at the secondary level to students’ achievement. The implicit inference that is or should be, indeed, a matter of great concern to educators in Mauritius, relates to the role of the schools to bring about an effective change in learning and performance. Are similar patterns reproduced at both the primary and secondary level implicit of a certain degree of passivity as a reaction to the low achievement. Can we attribute low achievement to factors outside the school in a system where punctual and formative measures are not adopted?

Achievement in General Paper cannot be used as an indicator of students’ mastery of the English language. The statistics have to be interpreted in view of the fact that, the objectives and competencies being aimed at, are not the same for English language at SC level and General Paper at HSC level, a link cannot be established. If the comparison is made with the English paper, then a completely different picture emerges with a similar achievement pattern as in English at SC with more than 50% of candidates scoring at most a C grade.

Interesting statistics relate to the achievement for French language, which is among the highest across all subjects both at the CPE and SC level. On average at the CPE level, 30.9% of students score either an A or a B and at the level of SC 44% of students score at least a higher credit. What is also noteworthy is the narrower gap which exists between urban, sub-urban and coastal schools and across all school types in secondary schools. A number of alternative hypotheses can be posited to explain the trend but, it is undeniable that students benefit from greater exposure to French used as a social language and the language which is more visible through the media and the child’s

proximal environment. Furthermore, one has to also consider the status given to French languages in the curriculum. While English is considered as the second language and is marked accordingly, French has only the status of “*langue étrangère*”, the marking is, as per the claim of paper markers, according to the criteria established for such languages. Thus, care must be taken to interpret the better performance in French as compared to English. At HSC level, for French, more than 30% of students have consistently scored either A or B.

5.4 Achievement in Other Streams

Though a direct comparison cannot be made between EVS in primary and Science in secondary schools we will highlight the general improvement for EVS has been registered over the past years in the distribution among passes at the primary level and a narrowing gap between schools across geographical categories, as being encouraging. As concerns the secondary level, achievement of students has fluctuated very little across different brackets and across the different individual science subjects, though the failure rates have remained high especially in Biology. The school differential is however pronounced in science where state and confessional schools have a clear lead as compared to private schools, which account for the large majority of our student population. The data also supports the already documented gender gap at the SC level. The school type achievement gap is very evident for science subjects where state schools have a definite lead especially where girls’ achievement in Science is concerned.

With respect to business subjects, the high failure rates (40%) and low % of distinction (less than 6%) in Business Studies persist over the seven year period although in this particular subject streams, students of Principles of Accounts normally perform better with 31% of students obtaining at least a higher credit. However, for HSC, achievement in Principles of Accounts follows the same trend as observed in other subjects at HSC level with less than 15% scoring either A or B. Statistically the status quo observed in terms of performance reflects the reproductive nature of achievement. As a student progresses through the educational ladder, except in a relatively few cases, there are only slim chances of improvement. In the case of business subjects at SC, around 22% were scoring either a distinction or a lower credit. At HSC level, this figure is reduced to less than 15%.

The idea of comparability of educational achievement across CPE, SC and HSC is governed by the expectation that as a student goes through the system, he has to perform better. In a functional system, which has developed an understanding of causes of failure and promptly adapts corrective measures, improvement must be expected. Notwithstanding the fact that the level of difficulty is bound to increase, the funnelling process observed at the level of achievement augurs ill in an era where a country’s ability to develop knowledge in scientific and technological field is crucial for its survival.

The trends at the level of the three examinations reflect a complacency that defies rational thinking. Have the measures taken led to only cosmetic changes? What is the role of stakeholders such as the Ministry, the MIE, the MES, The Regional Directorates?

5.5 Achievement related to School Type

There is a slight indication that among the distribution of passes, that there is a narrowing of the gap between Urban and Coastal/Suburban schools. The pattern of differential gender achievement in

Maths has not been stable over the years with girls' achievement outstripping that of boys for 3 years (2001–2003). At SC level, the Maths paper is taken by the majority of pupils. The trends have remained very stable at a low level.

The data projects a bleak picture of the quality of education being provided in our schools. The cycles of underachievement or non achievement are replicated over a period of 14 years for CPE and 7 years for SC across the variables of gender and school type. It does not seem that female underachievement in Maths and Science has been adequately addressed and that the educational experience and achievement of children growing up in disadvantaged areas (mainly coastal and suburban) have not improved significantly. Though there seems to be encouraging years in the trend, sustained improvement is yet to be registered.

Since 2000, (Ending the Rat Race: 2000), government initiatives were directed towards closing the achievement gap through the ZEP school project. The basic aim of this project is to provide opportunities for pupils for positive school experiences and to raise their achievement. The statistics reveal that although overall % pass has shown slight if not sustained improvement, % students in the higher grades has fallen over the period and the % in the lower categories has increased substantially.

With respect to achievement at secondary level, there is a marked discrepancy between the State and Confessional school, on the one hand, and the Private schools, on the other hand. The gap is even more pronounced in specific subject streams like science where only 1 % of students coming from private schools score an "A". There is a marked achievement gap within school categories. In subjects like Maths, the average percentage of students scoring A in first mentioned category is more than 25 whereas in private schools it is only around 6.5% on average, although in high achieving private schools the average reaches 13.5%. Overall, it can be observed that the achievement pattern for average achieving state schools is similar even if slightly better than high achieving private schools. High achieving confessional schools display similar trend compared to the first mentioned.

5.6 Achievement according to Gender

Differential gender achievement has been noted at all levels. At the CPE level, the gap in terms of languages has been striking with girls taking the lead in all the languages and the boys outperforming the girls in EVS and Maths. There is a clear trend, however, for the past few years that girls are making up more quickly than boys. Indeed during 2001, 2002, 2003, more girls scored in the upper brackets than boys in Maths. Similarly, there is also evidence of a closing gap between girls and boys for the last three years in EVS.

Given the fact that there are fewer boys than girls taking part at School Certificate examinations, that is, 49.3% as compared to 50.7% respectively, the difference was not considered statistically significant enough to impact on the gender gap estimation. At the secondary level, girls maintain their lead overall especially in terms of earning distinction in languages and having lower levels of failure. In Maths, more boys earn distinction compared to girls, even though, a slightly lesser number of girls fail than boys. The statistics reveal that for State schools, girls tend to perform slightly better than boys. Thus, there are qualitative changes observed in terms of gender performance differential especially in the higher brackets.

The gender gap seems to widen at HSC level overall in all subjects taken. Subject wise, boys' advantage in Mathematics is not maintained at HSC level whereas girls' lead is confirmed in languages. However, with respect to the number of entries recorded, there is a more significant difference at the HSC level as compared to SC level. There gender proportion is as follows: 53% for girls and 47% for boys. Since the focus is on achievement, the refinement for calculating gender achievement, which takes into account differential entries, has not been applied. It is premised that all students who choose a particular subject have the pre-requisites.

With respect to Science, despite within subject fluctuations, it is to be noted that across all science subjects, the data shows that the percentage **of failure for girls is decreasing whereas that of boys has been consistently increasing.**

5.7 Interpreting the Language of Statistics

The three previous chapters have provided descriptive statistics at the level of the CPE, SC HSC examinations. Interesting trends were highlighted, some disproving generally shared beliefs, and others, providing an empirical support to common hypothesis. It is, however, important to decode the language of statistics to make it more amenable to pedagogical investigations with a view to extrapolate the implications for policy in education.

5.7.1 What is happening to Achievement in general ?

Before engaging in a discussion on the statistics on achievement, two important qualifications need to be made: firstly, achievement refers to achievement at the level of examinations and is measured as a grade and not marks; secondly, conclusions must be made, taking into account the fact that the grades may not refer to fixed marks. However, even with the limits just mentioned, it is clear that the trend has been generally in a downward direction, even though, year to year fluctuations may have occurred within subject areas and categorization more erratic. It is no exaggeration to state that the level of achievement has degenerated, even in the face of increasing government investment in education. If achievement at the level of examination is construed as the single most quantitative indicator of the returns the government is earning on educational investment, and if, other qualitative measures of educational achievement are not available to complement the picture, which now emerges in the course of this study, **it is clear that education is a sector where returns are declining.**

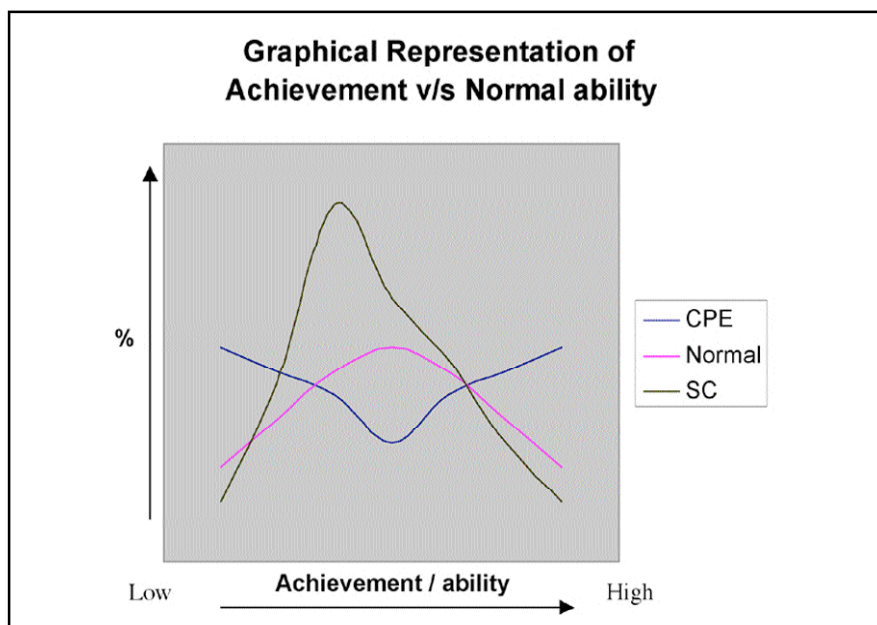
This trend is in serious contradiction with what the general expectations are especially in view of the renewed emphasis on quality education. If parents are today more conscious of the need to educate their children for employability, teachers are increasingly trained, technology is being integrated to facilitate learning, the government is investing massively, why is achievement spiraling down?

The snapshot evaluations provided at the level of those three examinations must compulsorily be supplemented by interim results. These would be reflective of the processes or “cheminement” of the students. In our system, there is a total black-out on the process and we “discover” the magnitude of the problem only after 6 or five years! Interim evaluations would enable redirecting efforts and necessitate the setting up of a monitoring system based on benchmarking, accountability and a certain degree of control.

The list of possible explanations has been well documented in the wide array of research carried out on both our primary and secondary system of education. The issue at hand regards the self-perpetuating nature of this “dis-ease”. What is more important is the comparative position of Mauritius with respect to countries at similar level of development. Though comparative studies have not been made, it is not unreasonable to expect that in countries like Singapore, educational achievement trends are the reverse.

5.7.2 Remarkable stability or Programming

One of the most prominent findings of the study relate to the stability of results around the averages. Notwithstanding the fact that all examination are subject to a process of standardization, it is questionable whether examination grades, (which are currently used as the only index of achievement and in the eyes of the general public a measure of “intelligence”) really measure what they purport to. The repetitive trends indicate that our student population and achievement at CPE and SC is distributed graphically as follows:



An inverted U shape curve or inverted normal curve is derived weakening the hypothesis that achievement trend follow the pattern expected from a “normal” population. For the past 14 years or more at the CPE, achievement trends have remained almost impermeable to any sustained change. Either students’ ability is more or less invariable across subjects or the pattern is inbuilt in the way the paper is set. A different picture emerges at SC level. While it is generally acknowledged that ability is distributed according to the normal bell curve, there seems to be an unexpected transition from CPE to SC. It does seem that if parallel is established in terms of high, average and low achievement and grades are compared from CPE to SC, the situation degenerates as shown graphically by the area under the curve: approximately only 1/3 of the area is common for A and B indicating that **2/3 of those who score either A or B, slide to a lower range of achievement at SC level for the core subjects and even more so, in HSC**. Indeed, while it could be argued that such a process of funelling is to be expected as we progress up the educational ladder, it is also equally natural to expect that schools students develop the cognitive and emotional maturity required to deal effectively with the increasing level of difficulty: with such large % being excluded at each

important turning point, what conclusions can we draw on the ability of schools to fulfill the above mentioned functions? It is often suggested that out of school factors and it is beyond the scope of the study to assert the relative responsibility of either set of factors. However, this limitation would not exonerate stakeholders for their share of blame and inaction and passivity. What is more, given the prevalence of private tuition, the current achievement levels may still be an over estimation of the school's input.

The previous graph shows that there is limited possibility for reversibility of achievement. However the % of students scoring either A or B in at least one subject is indicating at least a potential for scores above average achievement. But does the system really offer to students a chance to optimize dormant potential. Why is it that statistically, a more or less fixed % is condemned to low achievement or failure every year?

One can easily argue that similar patterns can be observed in other countries. While this is true, when, in any other country has there been such a publicly declared effort in investment in education?

All the actions initiated within the educational sector must not only be gauged with respect to the primary indicator of pass rate, but also the qualitative distribution of results across grades must be considered. The statistics are unequivocal and unambiguous, achievement generally has gone down despite years of investment and effort! If we are living in an age where returns on investment must be measured and accounted for, then, **it seems to be a legitimate conclusion to state that education is one of the most inefficient sectors of the economy.** At the National Debate on Curriculum held in September 2005, the representative of Mauritius Employers Federation made the following declaration *"Our HSC school leavers are not ready to face the realities of the workplace. We have to start from scratch. What are the schools doing?!!"*. It is not only the perspective offered by the statistics but a general sentiment that the 'products' of our schools fall short of the expectations of diverse stakeholders. The moot point is now related to the qualitative controls, if at all, they are set/build in our system. Could it be that policy initiatives did not produce the expected effects because the corollary quality control devices or monitoring systems were not implemented?

In the recent years the MES in collaboration with Cambridge is now 'feeding back' to teacher comments from Examiners and organizing workshops to enable teachers to better prepare their students for examinations. It is laudable initiative and will, no doubt, in the course, improve matters. However, one basic issue remains, how do we empower schools as communities to remain committed to the achievement agenda? Apart from ad-hoc 'external' training given to teachers, is it not more judicious to assess the ways in which schools can be transformed into learning communities. The choice is between considering achievement as the primary outcome of good mastery of examination skills and, viewing it as the natural result of a successful process of education, appropriate curriculum and pedagogy. If children are achieving only because they have mastered examination skills or achieved the objectives of the syllabus, then it is a short term prospect which could be envisaged as a quick remedy to meet the economic requirements of education. However, achievement must in the long term reflect the broad objectives of the curriculum. If the latter is attained, education becomes a self-sustainable project. This leads us naturally to question the role of the National Centre for Curriculum Research and Development. Can it be construed as only a textbook making agency as elaborated in the Strategy for Reforms (2006: 17)?

5.7.3 Science: The hardest nut to crack

The pattern at secondary level has been less impressive especially for private schools which have registered the lowest % distinction and highest % of failure. There is little need to point out today the centrality of science in the curriculum and economy. However, a large number of private schools have been achieved below average and it seems that only the highest achieving schools are able to produce good achievement levels. The findings suggest that there is a very strong school effect where science is concerned. Is science a capital intensive subject? The discrepancies in terms of school achievement need to be highlighted and addressed among all the private schools. The PSSA, as the monitoring body, shoulders, in theory, the responsibility of ensuring that proper benchmarking is made and adhered too. The outcomes of this study leads us to question the extent to which the organization has been achieving its targets.

While school effect cannot be eliminated, what is disturbing is the picture produced by the data and the resultant enclaves. It does seem that some categories schools tend to reproduce identical patterns of achievement. If it is assumed that the clientèle assigned to them has a particular profile, then it is posited that in some cases, what is normally termed as the “*school effect*” should be now referred to as “Zero School Effect”. It does not seem that the schools do not really change achievement of children, the initial potential is simply, at best, maintained. It is of great interest to note that high achieving schools, which are allocated the best outcomes of primary schooling, do produce declining achievement pattern. In general is it legitimate to claim that, at best, schools, can only help students maintain their acquired potential or do nothing to enhance it and at worst, discounts some of the initial aptitudes?

5.7.4 Did anyone say Mathematics?

The situation is made even worse if the trends in Mathematics are considered. The trend at the higher end of the scale may not be as alarming as those at the lower end at the primary level. Mathematics is one of the essential skills for functional numeracy and yet around 50% of our primary school going children do not master the minimum skills. Achievement in Mathematics is also regarded as a determinant of educational success. More than a score or a grade, mathematics enables the development of a set of thinking skills which are perceived as crucial for effective functioning in society. What decidedly compounds the problem of achievement in Maths is the realization that many teachers devote more time teaching mathematics than any other subject in the primary school curriculum and, in spite of this, achievement is still low. The pattern is carried over to the secondary level with low percentages of distinction and high rates of failure.

5.7.5 The Language Paradox

One alternative way of considering educational achievement is to analyse the trends in the lower end of the scale instead of focusing on the upper end. From this perspective, achievement trends in all languages are on a downturn- a disappointing state, if one considers the emphasis being placed on the diverse means of communication and democratization of access to the internet. Can these be effective if the teaching and learning process is itself not enhanced, if a genuine approach is not adopted to boost the culture of reading rather than the half baked approach that relies solely on providing a personal computer to each family? Even for French which has greater media and social visibility, markers at the level of all examinations have reported a decline in the standards which is not always reflected in the statistics.

The current study has provided an empirical grounding which supports the common sense beliefs of many stakeholders who work with children about the general linguistic impoverishment which seem to characterize our educational landscape. Achievement in language is dependent upon the cultural resources and the quality of interaction both at home and at school and in the wider societal milieu apart from the direct opportunities provided in the formal curriculum. Is the achievement trend not reflective of limitations at all of these levels? How can the school, the home and the community function in a more synergistic way to enable children and adolescents to develop language skills necessary for effective functioning in the current context?

Chapter 6

Conceptual Framework

6.1 Introduction

The current research status on the issue of educational achievement points out to key determining factors which have a bearing on the educational experience of children. These are generally divided into 3 broad clusters of factors. Firstly, the individual drives related to self such as own ability drive, motivation, self concept and self esteem which are also closely related to the other two categories. Secondly, the family processes which determine, to a significant extent, the self as well as access to the different forms of “Capital” such as social and cultural capital. Thirdly, the school processes which relate to the diverse ways in which school enhances educational achievement such as positive expectations, providing learning opportunities and developing skills for learning.

With regard to the first set of factors, two schools of thought have underpinned research. On the one hand, educational achievement and life achievement are viewed as being heavily influenced by initial ability and dispositions normally embodied in what is commonly referred to as intelligence. The latter is construed as one of the most important determinants of educational achievement. The intelligence theory in psychology rests on the premise that differential educational achievement reveals the intellectual differences which are themselves a product of genetic and environmental differences. Though widely criticized and superseded by a more sociological approach to the study of educational achievement¹, it nevertheless makes, every now and then, a sporadic apparition in the research landscape though it has a more tenuous stand in public perception. The 1995 work of Murray and Herrnstein (Nash: 2001: 190) makes the case for considering intelligence as the most important single determinant of educational achievement. Intelligence is understood as an innate ability which is genetically defined and which is more or less a static attribute of a person. Further, intelligence can be measured by diverse psychometric tools among which the IQ test is the most widely utilized.

However, in the Mauritian context there is no database and no research which has contextualized and developed the appropriate tool to measure intelligence. Indeed, educational achievement is considered in public perception as the measure of intelligence, though there is no scientific grounding to such a claim. Investigating the interrelationship between those two variables do not fall under the purview of the present study. Therefore the ability/ intelligence perspective will not be studied for the above mentioned reason and, also, because the psychometric theory of intelligence as a determinant of educational achievement has been found to be limiting theoretically and empirically because of the problems in measuring intelligence and the dismissal of the genetic interpretation of intelligence to a more environmentalist one (Bowles and Gintis 1976)². Indeed it is now commonly acknowledged in the field of education research that:

¹ Howe, M. J. A. (1997). *IQ in Question: The truth about intelligence*. London: Sage.

² Bowles, C., & Gintis, H. (1976). *Schooling in capitalistic America. Educational reform and the contradictions of economic life*. New York: Basic Books.

- (i) What is commonly termed as intelligence is not a static attribute but changes as a result of cognitive socialisation
- (ii) There is a diversity of intervening variables, most of them environmentally determined, which mediate between ability and achievement

6.2 General Factors affecting Achievement in Schools

6.2.1 The School Factors

The existing literature highlights the following school factors which impinge upon educational achievement:

- (i) Teachers
- (ii) Curriculum
- (iii) School Facilities and resources
- (iv) Pedagogy

Though all four of them are interrelated, they have all been independently the subject of a number of studies (Landson-Billings³: 1994; Osborne:1999⁴)

Within the context of this study only one of the aspects related to teachers was taken into consideration, that is, the role model aspect. Teacher effect on students' achievement is normally articulated through the teacher expectations effect (Ferguson: 1998)⁵ and modeling effect (Bandura: 1991), teacher own pedagogical and professional competencies to ensure that children are provided with an intellectually stimulating and psychologically safe environment (Goldhaber and Brewer: 1996)⁶

Teacher effects⁷ get translated into a number of intermediate variables which affect learning and potentially achievement. The choice of teacher role modeling effect, in this current study, is justified in terms of historical and social context of Mauritius under the period of study. It is posited that, given the working class background, which a number of the respondents' families belong too and the level and quality of school resources prevailing at that time, one significant denominator of motivation for success must have been the teachers.

Additionally, given the ongoing educational and research debate⁸ as to what teacher effects can be quantified and the existing literature highlights that it is the students rather than the schools who

³ Landson-Billings, G 1994, *The Dream Keepers : successful teachers of African American Children*, San Francisco, California Joey – Bass Publishers

⁴ Osborne G. W Unraveling educational achievement among Africa American Boys from Identification with academic perspective, *Journal of negro education* 68,55-565

⁵ Ferguson R, 1998 *Test Score Trends along racial lines, 1971-1996: popular culture and Community Academic standards* 348-390 *America Becoming : Racial trends and their consequences* Volume 1 National research Council. Washington DC National Academy Press

⁶ Goldhaber D, Brewer D 1996 *Developments in School Finance Evaluating the effect of teacher degree level on Educational performance*

⁷ Westbury, Marilyn. (1988). *The Science and the Art of Teacher Effectiveness: An Examination of Two Research Traditions*. Canadian Journal of Education 13:1

⁸ Hanushek, E. A. (1997). *Assessing the effects of school resources on student performance: An update*. Educational Evaluation and Policy Analysis, 19(2), 141-164.

make the difference⁹ (Coleman :1968; Wenglinsky 2002). It must mean that the teacher, though not a direct variable on students' academic achievement must be an intermediate variable potentially affecting motivation and expectations of life and schooling. The tripartite model of motivation for achievement proposed by Tuckman (1999) which focus on attitudes, beliefs and strategy places the teacher, as a significant adult with whom the children is in contact on a daily basis and for sustained periods of time, at the core of the motivational processes which affect achievement.

Notwithstanding the fact that classroom and school practices do affect achievement both quantitatively and qualitatively, the present study is grounded on the assumption that in the Mauritian context, the main factors influencing educational achievement lie outside the school with the individual, the family, the wider social setting (Hanushek: 1996). The motivation for adopting this approach were two major projects, the Coleman Report (Coleman et al, 1966) in the United States and the Plowden Report (Peaker, 1971) in Great Britain, which generally concluded that family background was more important than school factors in determining children's educational achievement. These studies sparked a great deal of interest in assessing the determinants of educational attainment and achievement and set off a lively debate regarding the roles of family and school factors.

In the light of Educational Production Function approach to measuring the relationship between educational input, its outputs and some researches have found that when the social backgrounds of students are taken into account, school characteristics do not seem to impact on student outcomes, drawing attention to the fact that schools do not serve as avenues for upward mobility, but instead reinforce existing social and economic inequalities (Coleman et al.: 1966). Other researchers contend that school characteristics can have a greater effect on student outcomes than would be expected based upon student background (Lee, Bryk and Smith, 1993). But while the research in support of this contention does find significant effects for school characteristics, the magnitude of these effects tend to be modest, far overshadowed by the effects of student background characteristics.

6.2.2 The Background factors

Students' background is construed generally in terms of what is commonly referred to as the SES and, the pioneering work in the field of sociology of education which considers the intervening social environment of the child as one of the most important factors affecting achievement. The social environment of the child can be further delimited at various levels. We can consider intermediates which operate at the meso levels such as the school which is also a powerful mediator because it influences motivation and attitudes towards education and learning. The impact of the community and peers is not to be underestimated because they impinge upon the expectations and aspirations of individuals (Bank et al: 1990)¹⁰. The family processes operating at the micro level are often construed as one of the most researched into factors.

The understanding generated by studying the above mentioned environmental factors and their impact with both educational and life achievement, has had an impact on both the policy and practice of education. The present study brings together various strands of theoretical perspectives.

⁹ How Schools Matter: The Link Between Teacher Classroom Practices and Student Academic Performance Harold Wenglinsky (2002) Educational Policy Archives Volume 10 Number 12

¹⁰ Bank J.B. Slavings R. L. Biddle.B.J (1990) Effects of peer, faculty and parental influence on students' persistence Sociology of education 1990 vol 63

Bourdieu's theory of Capital, and its later refinements¹¹ have indicated that family processes at work which determine the scholastic and professional trajectory of children. The notion of capital has been further analysed in terms of human, financial, social and cultural capital. The first mentioned relates to the potential for a cognitive environment, that is conducive to a child's learning, is generally measured by the level of parents' education. The second, that is financial capital are the physical resources that aid in learning and measured by wealth and income. Social and cultural capital are both intangible aspects because they exist only in the relationship among people. Coleman (Wong: 1998) defines social capital as the relationships between children, parents and in community organizations that are useful for the cognitive and social development of the child. It is made up of the time parents spend monitoring, nurturing and teaching their children at home. Because we are interested in considering both educational and life achievement and understanding the intergenerational conversion processes, it has been deemed fit to embrace a broader view of social capital to include the social networks (Lin: 1990). The literature highlights the importance of individuals mobilizing and using resources from a network of institutional agents who have the capacity to establish supportive ties or even transmit resources directly and, thus establish favourable conditions for engaging and advancing in education and life.

The conceptual framework used for this study posits that social capital is a crucial complement to human and financial capital, and, unless parents use their economic resources in their parents' roles, the presence of these forms of capital will have little impact on the child's educational achievement. It may be possible also that parents with limited human and financial capital may be able to use social capital efficiently to have a positive effect on their children educational outcomes (Wong: 1998).

Additionally, the concept of cultural capital offers a useful vantage point to understand patterns of educational achievement at the micro level of the family. It is assumed that family lifestyles and consumption patterns are a critical source of children's cultural formation, which in turn, provides valuable educational resources that foster children motivation to learn and academic achievement. In a nutshell, it represents the quality of home environment and intellectual climate for children's educational aspirations. The measures of all four forms of capital are often overlapping but the present study focuses on what the current literature status has highlighted as being essential elements.

6.3 Adapting the Theory to the Context of the Study

6.3.1 Financial Capital

It is one of the most straightforward aspects of capital in the sociological sense. It refers broadly to the monetary resources at the disposal of the family which can be used to purchase goods and services (Hofferth et al: 1998). Financial capital is all the more important even in a system where schooling is free since 1977 due to the existence of a parallel system of schooling which is private tuition.

¹¹ Sin Kok Wong R. Multidimensional Influences of the Family environment in Education: the Case of Socialist Czechoslovakia 1998 Sociology of Education 1998)

6.3.2 Human Capital

The notion of human capital in our context has been conceived as the skills and abilities which are available in the home environment and are crucial to helping children in concrete terms. While cultural capital looks at the normative aspects of parental influence, human capital considers the potential for cognitive modeling from referent others in the environment. Given the Mauritian education system, with its focus on academic learning and cognitive skills, parents' ability to contribute directly to their children's learning is a significant dimension to be investigated. The human capital theory gains greater standpoint here because of the fact that school learning time has to be supplemented by paid tuition time and there is the suggestion that parents' choices about how much time and resources they are going to invest on their children's. These decisions impinge upon their children's disposition towards education and their cognitive skills as well as their education success.

6.3.3 Cultural capital

Both *reading habits and linguistic skills* represent important cognitive skills which can be culturally transmitted by parents (Farkas: 1996)¹². However, it can also be construed as being relevant to the concept of human capital as well because a parent's reading habits are more often than not a function of his education level, although in some studies the difference between middle and high income parents do not support the hypothesis. The intergenerational transmission processes of linguistic skills operates directly because linguistic skills are valued as learning skills in the school (De Graaf et al: 2000)¹³. The indirect and often more profound effect is better captured in Bourdieu's concept of 'habitus' which considers the dispositions and educational affinity with the school which develops as a result of positive habits at home. The cultural aspect of a family's role in educational achievement rests on the assumption that literacy is a socio-cultural practice. Like schools and classrooms, families can be understood as cultures in which participants construct their own particular ways of knowing, believing and valuing through interactions and when these corroborate with the cultural practices at school, the individual's chances of success are enhanced.

6.3.4 Social Capital

Given the specificity of the Mauritian context with regard to child rearing practices and the communitarian culture which till today characterizes to a certain extent the mode of social life, the notion of social capital has to be contextualized. While cultural and human capital establishes the intellectual climate at home, social capital has been construed as the vector that enables the translation of all other forms of family related capital (Hofferth et al: 1998)¹⁴. These impact on educational achievement through the intermediate variables such as educational stability, students' engagement in schools and learning, expectations about the benefits of schooling, the interrelationship between education and hard work. The outcome of such interactions defines the

¹² Farkas George 1996. Human Capital or Cultural capital? Ethnicity and Poverty Groups in an Urban School District> New York Aldine de Gruyter

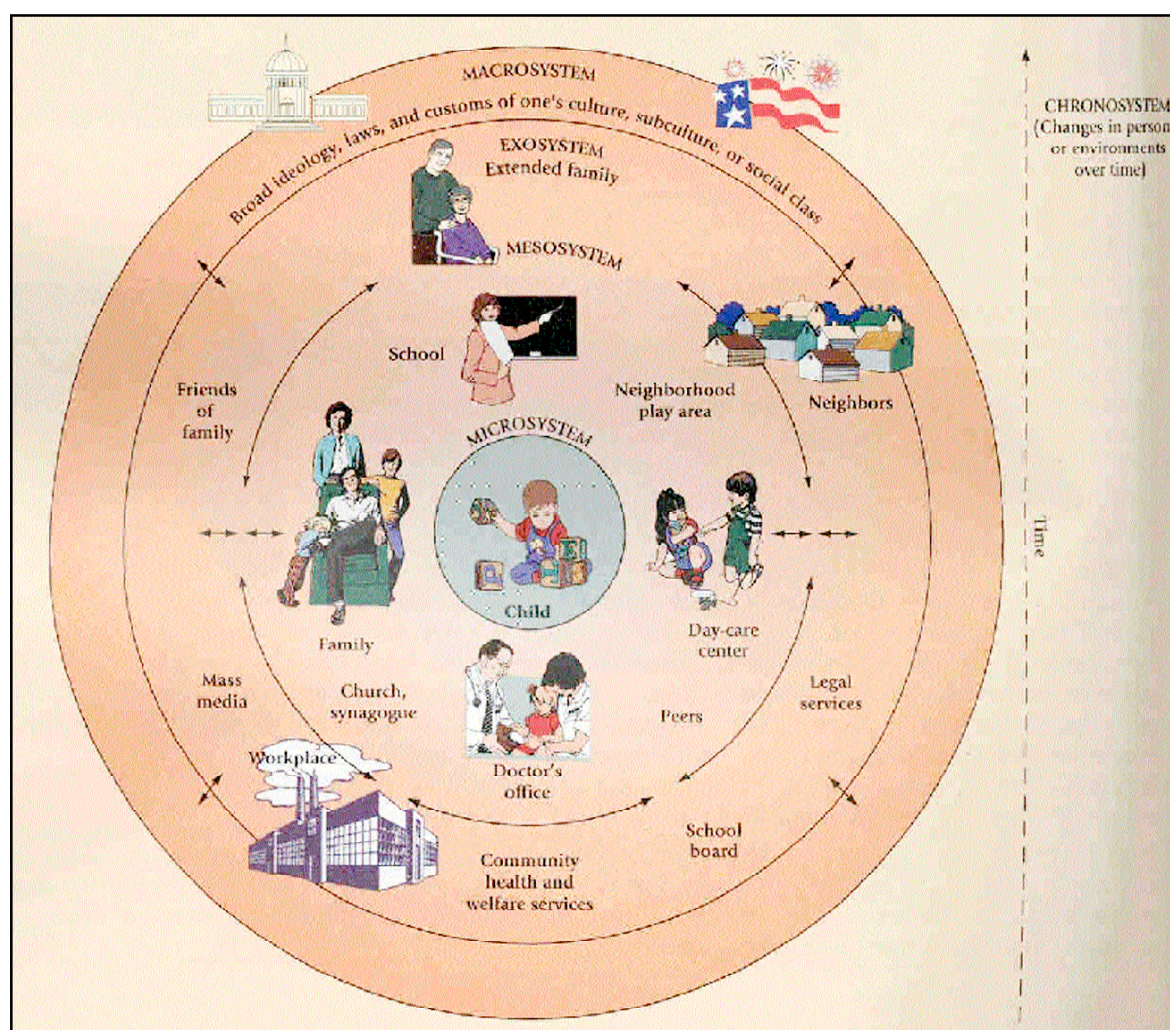
¹³ De Graaf N. D, De Graaf P. Kraaykamp G. (2000) Parental Cultural Capital and educational Attainment in the Netherlands: A refinement of the Cultural Capital Perspective. Sociology of Education 2000, Vol 3

¹⁴ Hofferth S., Boisjoly J Duncan G (1998) Parents extra familial resources and children's School Attainment Sociology of Education 1998 Vol 71

social matrix within which both children and families will operate and which shapes their perceptions of education and schooling as well as the resources to which they will have access to¹⁵. The historical experience of Mauritius shows that the concept of family relationships have to be expanded to include the extra-familial resources that parents can draw upon. While there is strong research evidence that the style of parents' relationship with their children has been shown to be linked to the development of their offspring, we wanted to assess the importance of social relationship among households. Coleman (1988) argued that these relationships provide a source of information and assistance. The linkages within a community with norms "shape and constrain" the actions of children and their families. Family "embeddedness" in networks may provide information about and connections to schools and good teachers and may facilitate communication and monitoring of children and their friends.

The above mentioned factors have provided the conceptual framework for understanding educational achievement. The variables identified have been fitted in a model which seeks to understand phenomena not as a series of isolated variables but as an interactive matrix of psycho-social factors.

6.4 The Ecological Perspective on Educational Achievement



¹⁵ Glenn D. Israel Lionel J. Beaulieu Glen Hartless, The Influence of Family and Community Social Capital on Educational Achievement *Rural Sociology* 66 (1), 2001, pp. 43-68

Using Brofenbrenner ecological model, the present study referred to the *microsystem*. The microsystem encompasses the relationships and interactions a child has with her immediate surroundings (Berk, 2000)¹⁶. Structures in the microsystem include family, school, neighborhood, or childcare environments. At the microsystem level, influences are strongest and have the greatest impact on the child. The *mesosystem* refers to the connection between the structures of the child's microsystem between for example between the parents and the neighbourhood.

The *exosystem* which defines the larger social system in which the child does not function directly. It impacts the child's development by interacting with some structures in her microsystem. Community-based family support systems are examples. The *macrosystem* - comprises of the cultural values, customs, and laws (Berk, 2000). The effects of larger principles defined by the macrosystem have an all pervading influence throughout the interactions of the micro, meso and exo-systems.

The *chronosystem* - this system encompasses the dimension of time as it relates to a child's environments. Elements within this system can be either external, such as the timing of a parent's death, or internal, such as the physiological changes that occur with the aging of a child. As children get older, they may react differently to environmental changes and may be more able to determine more how that change will influence them.

The present project seeks to document and investigate a number of these perspectives which affect the quality of the child's environment. At the micro level, the family influences and specially parental involvement is construed as one of the most significant elements determining the child's achievement. The school, for reasons mentioned in the previous section, will not be the focus although the teacher role modeling potential will be investigated in a wider context. The neighbourhood, however, has been construed as a key factor in view of its potential to orient parental and home practices. The meso-system has been defined as the interaction between the family, the neighbourhood and the religious organizations.

6.5 Conceptualising Parental Involvement and Parenting Practices

Parental involvement is variously defined as parental participation in the education of their child. Research overwhelmingly demonstrates that parental involvement in their child's education is positively related to the child's achievement. Parents by influencing attitude towards school, self concept, classroom behaviour, time spent on homework, expectations of one's future, absenteeism, motivation and retention (Cotton and Wiklund: 2000)¹⁷ determine achievement. The literature points out to good parenting includes in the home, the provision of a secure and stable environment, intellectual stimulation, parent-child discussion, good models of constructive social and educational values and high aspirations relating to personal fulfilment and good citizenship; contact with schools to share information; participation in school events; participation in the work of the school; and participation in school governance (Desforges and Abouchaar: 2003)¹⁸.

¹⁶ Berk, L.E (2000) Child Development (5th Ed), Boston, Ally & Bacon, 23-28

¹⁷ Kathleen cotton and Karen R. Wiklund Parental Involvement in Education, School Improvement Research Series, 2000

¹⁸ Charles Desforges Alberto Abouchaar, the impact of parental involvement, parental support and family education on pupil achievement and adjustment: a literature review, Department of Education and Skills, report 433

Parental involvement can be defined as school site involvement and as home involvement. The indicators for the former are (Johnston: 1998)¹⁹:

- (i) Attendance at school events
- (ii) Participation in the school committees
- (iii) Regular volunteer activities
- (iv) Employment at school and
- (v) PTA meetings

The indicators for the home environment according to Velez and Jones (1997)²⁰ are:

- (i) Helping the child with homework
- (ii) Communicating with the child about school
- (iii) Spending quality time with the child

Research²¹ (Baumrind 1989; Darling 1999)²² has conclusively established that parent-child interaction lays an important foundation for educational trajectory and academic achievement. When coupled with effective parenting strategies, manifested through high degrees of responsiveness and demandingness, it produces high child well-being in the domains of social competence, academic performance and psychosocial development. These variables do impinge on academic success. Indeed, it is argued that the most accurate predictor of a student's achievement is not income and social status but the extent to which a student's family is able to create a home environment that places a premium on learning, communicate high yet reasonable expectations for the child achievement and future career and are involved in community based activities.(Darling:1999). The impact of SES on education has been well documented. While poverty and deprivation limit family access to resources which are likely to enhance their educational chances, family size and parents' own characteristics such as education levels, parenting skills (related to discipline, communicating high expectations) demonstrably affect achievement (Redd et al, 2002).

6.6 Revisiting Peer influence

The influence of peers, both positive and negative has been extensively researched into. Children are socialized by a number of significant others in their immediate environment. The literature notes that a child's peer group influences social and academic development and that these influences begin at the very start of formal education. Because of the sheer amount of time the typical child spends each day with his or her friends, the peer influence on a child can be substantial (Wentzel:1998)²³. Peer influence is concretely articulated in terms of classroom behaviour, expectations on education and schools generally, participation in co-curricular at school and engagement or disengagement with

¹⁹ Johnston, J. H(1998) "Family Involvement models in Middle Schools. Allyn and Bacon, Boston Massachusetts.

²⁰ Velez, W. and Jones, Toni Griego (1997) Effects of parental Involvement on the academic achievement of Latino children Research and Opinion(11(1) retrieved Dec 2005, From the World wide web

²¹ Baumrind, D. (1989). Rearing competent children. In W. Damon (Ed.), *Child development today and tomorrow* (pp. 349-378). San Francisco: Jossey-Bass.

²² Nancy Darling, PhD, March 1999 Clearinghouse on Elementary and Early Childhood Education retrieved from world wide web on 21st May 2007 <http://www.athealth.com/Practitioner/ceduc/parentingstyles.html>

²³ Kathryn Wentzel, "Social Relationships and Motivation in Middle School: The Role of Parents, Teachers, and Peers," *Journal of Educational Psychology*, Vol. 90 (1998), pp. 202-209.

education. Though peers do not directly influence educational achievement the isolated effects of peers on scholastic achievement per se being quantitatively limited²⁴ (Hanushek et al, 2000), they are an important mediating factor. Peers provide a terrain for experimentation and sharing. That also help adolescents to compare their aspirations and set their targets for education and life. Additionally, peers, apart from equipping children with the social competences, act as an important source of information regarding education.

At its best, peer pressure can mobilize the adolescent's energy, motivate for success, and encourage conformism to school. Peers offer a socially acceptable outlet to fears and frustrations because they listen to, accept, and understand the frustrations, challenges, and concerns associated with being a teenager. At worst, peers may foster disengagement in schools and project low expectations from school or education. There is increasing research evidence regarding the role and function of peers in explaining educational achievement. Longitudinal studies have examined the implications of adolescents' peer networks for their school engagement, one study found that adolescents who perceive their peers as having higher aspirations have been found to be more engaged in school themselves (Murdock et al., 2000). There is a dearth of high-quality research on the relationships between the characteristics of adolescents' peers and their academic functioning. The existing studies suggest that peers may affect adolescents' achievement outcomes positively or negatively, depending on their orientation.

6.7 Investigating the Contribution of Neighbourhoods/ Community to Educational and Life Achievement

In the field of educational achievement, the impact of neighbourhood as a mediating factor has been studied with respect to SES which includes (poverty and deprivation, race and ethnicity). The body of research on neighbourhoods/ focus on how neighbourhoods/ communities define both parental and individual expectations and aspirations about education as well as parental practices that can promote or hinder educational achievement. It has been conclusively established that neighbourhood factors can effectively predict educational attainment (Have and Wolfe: 1995) and determine student engagement in school (Redd et al: 2002)²⁵. Concentration of advantage or disadvantage in a particular area or neighbourhood or community can accentuate disparities at the level of educational achievement (Bramley and Karley: 2005)²⁶. Residentially stable neighbourhoods where families settle in a more or less stable way enable the development of social networks among families. Arguably, greater stability would help strengthen the neighbourhood's social network, and a stronger network causes a variety of positive social outcomes such as local parent-teacher organisations, that could lead to progress in children's education. Stronger local social networks may also counter negative neighbourhood effects, for example crime, vandalism, drug abuse and other antisocial behaviour, through informal mechanisms of social control, peer group effects and alternative role models. There is also substantial evidence that the advantage or disadvantage associated with family background is currently compounded by young people's experience of school and, in some cases, local area.

²⁴ Eric A. Hanushek, John F. Kain, Jacob M. Markman, and Steven G. Rivkin, Do Peers Affect Student Achievement? December 1999 Paper prepared for the *Conference on Empirics of Social Interactions* Brookings Institution - January 14-15, 2000

²⁵ Redd Z. Brooks, J. Mac GarveyA. Background for Community Level work on Educational Adjustment, Achievement and Attainment in Adolescence: Reviewing the Literature on Contributing Factors: Executive Summary , Child Trends.

²⁶ Bramley G. and Karley K. Home-ownership, Poverty and Educational Achievement: Individual, School and Neighbourhood Effects Report to Scottish Executive Education Department Centre for Research Into Socially Inclusive Services Heriot Watt University, Edinburgh, UK

Chapter 7

The Survey

7.1 Introduction

Phase II of the research aimed at confronting statistical data with random real life profiles of the products of the system. It purported at catching glimpses of subject and subjective realities to develop greater insights into “meta – achievement” mechanism. This phase of the research project had three main objectives:

- to complement the set of yearly data obtained from nation wide statistics for the years 80-90
- to analyse individual educational trajectories
- to study the relationship between educational achievement and indicators of financial, human, cultural and social capital

The first part of the second phase involved the administration of questionnaires to 2,000 respondents from the age group 20-35 years in line with the statistics studied in phase I. The questionnaire has a number of purposes. It supplemented the data obtained from the MES in terms of examination results, and investigated some key variables related to family and community processes as explained in the theoretical framework. The questionnaire thus acted as a springboard for the individual in-depth interview and understand the life histories of “medley survivors” of the system, in a retrospective mode. It documented extensively and often both quantitatively and qualitatively, the educational and family background and the meso-configurations impinging upon individual educational and occupational choices.

Given the above mentioned aims, the sample was discriminately chosen on a number of key parameters. Firstly the age group had to reflect respondents who were between the age group 25-40. Since the first set of results, namely CPE results, covers the span 1990 onwards, individuals who sat for the CPE in 1990 are now in the range of 25-27 years of age. To make up for the period 1980 to 1990 since data in computerized form was not available, the respondents aged between 28-38 account for approximately 70% of the sample, that is, 1400 respondents. The CPE, SC and HSC results obtained from this sample was used to chart out the achievement landscape in the years 1980-1990. The educational data thus obtained supplemented the complete set obtained from the MES. However, the set of data obtained directly from the respondents in the questionnaire must be cautiously interpreted given that the sources have different levels of validity.

7.2 The Questionnaire

The sole instrument of data collection for the survey was a questionnaire (see Appendix I). The questionnaire was divided into 4 broad categories. The first set of questions pertained to the general information about respondents such as age, sex etc and aimed at ensuring that respondents came from varied backgrounds. The second series of questions documented the educational and occupational background of both the respondents and his family members. These questions were closed ended as the data was meant to be used to document the background of the respondents in terms of level of educational attainment and occupational track records. Both the first and the second sections aimed at providing information to map out the respondents in categories of educational and professional achievement as well as the family background. To gauge the SES we used parents' levels of education, that is primary, secondary and tertiary levels. In addition, we accounted for family composition and structure because the literature highlights the number of siblings may affect the availability (Goyette and Xie: 1999) of resources and parental attention. The third part of the questionnaire was based on both close and open-ended items which investigated the background of the respondents in terms of family culture, peer relationship and so on. The last part of the questionnaire dealt specifically with the educational experience of respondents.

Based on the literature review and the theoretical orientation of the study, questions were formed on the indicators and dimensions of the different concepts of capital.

7.3 Theoretical Grounding for the Questionnaire

7.3.1 Measures of Human Capital

For the purpose of the study, human capital refers to the education and the professional background of parents. The latter was added as an indicator because people's own learning and cognitive skills are also moulded by the professional experiences that they have. The historical and social evolution of the island points out to the fact that many parents may have benefited equally from informal education such as participation in community activities, personal reading and work which may not necessarily have led to any formal qualifications. Defining the potential of parents to academically contribute to their child's learning in terms of only parents education can be limiting. The educational and occupational background of family members are considered in questions 10 and 11. Question 15 additionally queries on the direct influence of both parents of the person's education in terms of direct coaching and providing encouragement.

7.3.2 Measures of Cultural Capital

Given that the idea that home practices related to verbally stimulating conversations, reading sessions, educationally related resources (books and magazines), parental warmth is well established, they were included as important indicators in the study. Questionnaire items 25-37 documents the respondent's family cultural profile. We assume that familiarity with reading at home will help children to do well at school. The support provided by the family was described in terms of the reading materials, membership to libraries and clubs as well as the recreational means. The family culture was also assessed in terms of the study habits at home, the nature of conversation and dialogue at home and the perception of discipline. These indicators were all construed as essential cultural resources available in the home environment.

7.3.3 Measures of Social Capital

We have included the structure and the number of ties, the contact and closeness shared between parents and children, access to help from grown up siblings and the impact of the larger neighbourhood. Students' academic stability was assessed in questions 6 and 7 which considered their academic trajectory and performance on National examinations. Questions 8 and 9 enabled us to infer about the family background. No 16-21, as well as 27 involved a number of variables which give us insight about the larger community as did 38 and 39. Questions 40 and 41 queried about the personal expectations and opened up an avenue for any possible role modeling.

7.4 Survey Statistics- The Survey Profile

7.4.1 Sample Descriptors

Given that the survey sought to collect data on the individual family set up and the intergenerational processes of transmission taking place within different families, two levels sample descriptors have been identified. On the one hand, data was collected on own family if the respondents were married and had children and on the other hand, it was deemed to be crucial to document family data in the respondent's parental homes. Questions related to the family structure in terms of marital status and extended/nuclear/single/reconstituted would contribute to understanding of the relationship between family type, educational environment of the home through the mechanism of cultural/social/human capital.

7.4.2 Distribution by Age and Sex

AgeGroup	Female	Male	NA	Total
25 – 27	14.8	16.2	0.4	31.5
28 – 31	9.4	12.6	0.3	22.2
32 - 34	6.2	6.4	0.2	12.8
35 - 37	6.0	6.2	0.4	12.7
38 - 40	9.1	9.8	0.8	19.7
NA	0.5	0.6	0.1	1.2
Total	46.0	51.8	2.2	100.0

The gender balance was maintained as evidenced by the sample profile statistics and the respondents were chosen from a diversified background both socially and culturally and the occupation profile is varied.

7.4.3 Distribution by Religion and Sex

Religion	Femalet	Male	Total
Hindu	22.5	24.8	47.2
Catholic	12.3	13.1	25.4
Islamic	7.8	9.8	17.6
Buddhism	0.1	0.1	0.3
Other	0.3	0.5	0.7
Non-Believers	0.3	0.3	0.6
NA	3.8	4.4	8.2
Total	47.0	53.0	100.0

7.4.4 Ethnic Distribution Respondents' and family type distribution

Distribution of Respondents in terms of ethnic group	Total (%)
Asian (Chinese)	3.8
Asian (Hindus)	51.8
Asian (Muslim)	18.5
Creole	25.8
Total	100

Respondents' family type Distribution	Total
Extended	16.80%
Nuclear	77.19%
Reconstituted	0.45%
Separated/Divorced	2.03%
Single Parent	2.25%
Widowed	1.28%
Total	100

7.5 Educational Attainment of Parents and family type (Parents Home)

Level of Educational Attainment	Extended	Nuclear	Reconstituted	Separated	Single Parent	Widowed
Primary	45.9	45.1	46.2	48.1	51.8	50.0
Secondary	39.8	37.9	25.6	35.7	38.0	35.3
University	8.5	10.4	12.8	7.1	5.6	7.8
Technical or Other	5.8	6.6	15.4	9.1	4.6	6.9
Total	100.00	100.00	100.00	100.00	100.00	100.00

The above table describes a two way matrix analysis involving family type and educational levels of family members. The latter includes primarily the education levels of both parents in terms of the highest level of education obtained by one of the parents. The data raises the issue as to whether the family type has an impact on educational trajectory. Educational attainment seems to be comparable across family types. The interesting issue revealed here relates to the significance of family type and educational achievement. While the international literature highlighted the fact that family type in terms of single parent home may have a negative impact on educational achievement, our set of data stands in contradiction with this claim.

7.6 Educational Trajectory across Subjects of Survey respondents

7.6.1 Maths Results in CPE and SC

SC Grades in Maths	CPE Grades in Maths					Total
	A	B	C	D	E	
Distinction	41.2	16.1	10.1	0.0	0.0	35.9
Higher Credit	36.5	28.0	34.8	7.7	0.0	35.0
Credit	16.5	39.1	24.6	46.2	100.0	20.2
Pass	5.1	12.4	20.3	30.8	0.0	7.1
Fail	0.7	4.3	10.1	15.4	0.0	1.8
Total	100.0	100.0	100.0	100.0	100.0	100.0

7.6.2 English and French Result in CPE and SC

SC Results CPE	Grades at CPE in English					Grades at CPE in French					Total
	A	B	C	D	E	A	B	C	D	E	
Distinction	13.5	2.2	0.0	4.2	0.0	65.3	14.7	10.7	0.0	14.3	54.1
Higher Credit	31.1	17.8	15.5	0.0	14.3	29.4	55.1	37.3	36.7	42.9	33.3
Credit	42.9	43.9	36.6	16.7	14.3	4.5	27.6	41.3	53.3	28.6	10.7
Pass	11.6	32.8	40.8	70.8	71.4	0.8	2.6	9.3	10.0	0.0	1.7
Fail	0.9	3.3	7.0	8.3	0.0	0.0	0.0	1.3	0.0	14.3	0.2
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

A comparative analysis for English and French results concur with the findings obtained from first-hand data obtained in phase one of the research insofar as achievement in language is concerned. Clearly, achievement in English is much lower as compared to both Mathematics and French. Of relevance here is the fact that **only 13.5 % of respondents who score grade “A” in English at CPE level, earn a credit at SC level**. The probability for reversibility of trends is also much less than for Mathematics with only 7.7 % of students scoring a “D” at CPE level earning a higher credit at SC level.

For French language, the findings also concur with other sources of data insofar as achievement is highest in this particular discipline. **78% of students who score at best a “C” in French as CPE level make it to a credit at SC level.**

With respect to the core subjects being studied, two conclusions can be made. On the one hand, data from our sample show that **for English, low achievement at primary level tends to perpetuate itself at subsequent levels of the educational ladder. Secondly, for Mathematics and French, there is a very significant possibility of reversing earlier trends in achievement at higher levels.** What is of relevance here for stakeholders in education is to uncover the processes through which an individual can be empowered to improve achievement.

7.7 Comparative analysis of Family Characteristics

The second section of the questionnaire dealt with issues related to the family background of the participants and aimed at charting out the profile of the family in terms of its educational characteristics. Chief among our concerns here was the need to identify the potential sources of positive expectations and influences within the family or immediate environment which impinge upon an individual’s ability and desire to achieve. Additionally, while studying family effects on educational achievement, the intergenerational family processes were also highlighted.

The first set of data presented relates to the direct ways in which parents affect the education of their children. In line with the theoretical framework set, indicators were developed related to measures of “Capital”.

7.7.1 Own Family type V/s Parental Involvement Indicators

Family Type	Ext		Nuclear		Recons		S/D		SP		Widowed		Average	
Indicator	F	M	F	M	F	M	F	M	F	M	F	M	F	M
Providing financial resources	80.3	32.0	82.2	34.2	50.0	50.0	50.0	35.7	58.1	35.5	41.2	58.8	60.3	41.0
Coaching for your homework	22.4	29.4	22.0	29.2	16.7	16.7	14.3	39.3	16.1	22.6	17.6	35.3	18.2	28.8
Looking for private tutors	35.1	22.4	36.8	22.7	0.0	16.7	32.1	17.9	25.8	25.8	23.5	29.4	25.6	22.5
Providing encouragement	55.7	65.4	55.5	71.1	16.7	33.3	32.1	60.7	38.7	45.2	17.6	70.6	36.1	57.7
Helping you to set targets	40.4	38.2	38.0	39.1	0.0	0.0	17.9	46.4	25.8	25.8	17.6	35.3	23.3	30.8
Helping you plan your career	35.5	28.9	31.5	30.0	16.7	16.7	7.1	17.9	12.9	22.6	5.9	29.4	18.3	24.3

The data highlights interesting changes regarding the involvement of parents in the education of children. Irrespective of family types, fathers have a determining role in the financing of education of their children. On average, 60% of respondents agreed that their fathers contributed financially to their education whereas only 40% reported that their mothers were a source of financial support. On a comparative basis, the contribution of father has been more significant on two criteria: namely financial resources and looking for private tutors. **On all other criteria and across all family types, mothers have contributed more significantly.**

7.7.2 Parent Family type V/s Individuals influencing education

Family Type	Ext		Nuclear		Recons		S/D		SP		Widowed		Average	
Indicator	F	M	F	M	F	M	F	M	F	M	F	M	F	M
Providing financial resources	83.3	30.7	82.7	34.9	71.4	14.3	68.2	27.3	66.7	37.0	40.0	48.0	68.7	32.0
Coaching for your homework	19.5	28.0	25.6	31.5	14.3	14.3	27.3	27.3	18.5	18.5	20.0	36.0	20.9	25.9
Looking for private tutors	34.3	19.9	37.3	24.2	14.3	0.0	27.3	22.7	29.6	3.7	20.0	32.0	27.1	17.1
Providing encouragement	53.8	68.9	59.2	73.3	14.3	57.1	31.8	50.0	40.7	63.0	28.0	64.0	38.0	62.7
Helping you to set targets	36.0	37.5	40.6	40.2	14.3	57.1	31.8	18.2	22.2	33.3	12.0	32.0	26.2	36.4
Helping you plan your career	28.2	25.6	32.7	30.1	28.6	28.6	27.3	13.6	11.1	33.3	8.0	20.0	22.7	25.2

The intergenerational comparison shows the same patterns can be observed across generations in terms of the relative involvement of both parents. However one interesting and consistent pattern which the data reveals **that parental involvement is generally on the decline**. However, on average, the financial contribution of mothers has increased as well as coaching and mothers' involvement in identifying private tutors. However, while mothers have become more involved on a number of criteria, father's involvement has declined on all others. An interesting finding which must be highlighted here relates to the comparable percentages of single parents' home headed by female with both the nuclear and extended family backgrounds. The data reveals that, apart from the criteria of providing for financial resources, mothers in female headed families encourage their children more than fathers in the same situation. This finding corroborates with the current non western literature. Lloyd & Blanc (1996)¹ analyzed the effects of female headship on children's schooling in seven sub-Saharan African countries. Female-headed households tended to be poorer than other households, but children in female-headed households were consistently more likely to be enrolled in school and to have completed grade four than were children in households headed by men. They maintain that *"female household heads are more likely to invest resources, including time, money and emotional support, in facilitating the education of children living in their household"*. Whereas the US specially, there is a large documentation on the negative effects of single parenthood on the achievement and attainment of children, the findings point out that the Mauritian experience for the period under study was more similar to that of Asian and African communities. The different effects of family structure in Africa and other regions may also be linked to the nuclear family's embeddedness in larger kinship networks. For example, Lloyd & Blanc (1996) noted that extended family networks in sub-Saharan Africa enabled children with academic promise to move to households of "patron" family members, who help them gain access to higher quality schools. Pong (1996) illustrated the importance of extended kinship systems in moderating the effects of family structure on children's schooling in Malaysia. Pong attributed these results to the *buffering role* of large kinship systems often embodied in the community networks.

¹ Claudia Buchmann and Emily Hannum Education and Stratification in developing countries: A Review of Theories and Research Annu. Rev. Sociol. 2001. 27:77-102

7.8 Ethnic Group and Level of post Secondary Educational Attainment

	Post Secondary
Asian (Chinese)	27.5
Asian (Hindus)	23.8
Other	19.9
Creole	19.5
Asian (Muslim)	19.1

Given that the data on ethnic distribution of the population dates back to the 1972 census, the sample ethnic distribution is only indicative of the ethnic distribution of the population. The ethnic distribution regarding the level of educational attainment reveals that on average, more Hindus and Chinese completed their post secondary education although there is no wide discrepancy as revealed by the sample. Given that the first set of data provided by the MES only provided anonymous individual entries, it was not possible to study the ethnic element of educational achievement in greater detail. But the data strongly hints at an ethnic differential which must be taken up. Ethnicity embraces all these variables and is rooted in culture, shared identity, history and religion. "Ethnic groups" may be defined (or define themselves) on the basis of language, religion or nationality, but the idea of shared culture is perhaps crucial" (Bradley, 1996, p.121). Culture and identity heavily influence an individual's value system, aspirations, expectations, perceptions, and family processes which shape a child's readiness to learn, linguistic disposition and willingness to integrate school life. These have interactive effects on the formation of expectations and perceptions of school in particular and education in general and hence impinge on educational achievement. The last caveat for generating understanding the relationship between ethnicity and educational achievement is social class, which acts as an intervening variable.

7.9 Parents Education level and Achievement in English and Maths

7.9.1 CPE

CPE Grade	Maths							English						
	A	B	C	D	E	F	Total	A	B	C	D	E	F	Total
PEL														
Primary	71.7	16.4	7.6	2.1	0.9	1.3	100.0	69.3	15.9	7.6	3.8	2.2	1.2	100.0
Secondary	75.6	15.0	6.9	1.7	0.4	0.4	100.0	73.8	15.2	7.0	2.5	1.0	0.4	100.0
Technical or	85.0	12.1	1.6	1.1	0.2	0.0	100.0	84.2	10.0	5.8	0.0	0.0	0.0	100.0
Other														
University	89.0	7.8	2.3	0.7	0.1	0.0	100.0	88.7	7.1	3.0	0.5	0.7	0.0	100.0

7.9.2 School Certificate

CPE Grade	Maths						English					
	Dist	H Credit	L Credit	Pass	Fail	Total	Dist	H Credit	L Credit	Pass	Fail	Total
Primary	32.0	36.0	22.7	7.8	1.5	100.0	10.0	25.8	43.2	19.0	2.1	100.0
Secondary	33.3	33.1	23.9	7.9	1.9	100.0	10.4	27.4	42.2	18.0	2.0	100.0
Technical or Other	38.3	34.1	21.3	4.7	1.6	100.0	10.7	34.3	40.7	13.1	1.2	100.0
University	47.8	34.6	13.5	3.5	0.7	100.0	23.6	29.9	37.5	8.3	0.7	100.0

The data obtained reveals the higher the level of education of parents, the higher the educational achievement in the two core subjects. Despite the fact that it is not possible to draw correlational significance with the two variables under study, **the persistence of the trends at both CPE and SC levels points to the fact that respondents with educated parents have shown higher achievement especially at the level of distinction for SC English.** The literature review does, suggest that the education of parents affect directly the achievement of students because it represents human capital. Case studies using culturally specific measures of class have found significant effects of family class status on students' mathematics and language achievement (Lockheed et al: 1989, Niles: 1981). However, one has to keep in mind that education level of parents is a “latent” or intermediate variable, its effects can only be “triggered” by other key environmental variables as discussed in the conceptual framework.

No co-variant analysis was carried out primarily because the conceptual framework supported the multi-dimensional model adopted within the context of the study and secondly, the data collection instrument was not devised in view of enabling correlational analysis.

7.10 Parents’ Educational attainment and Involvement in the Education of their children

The matrix represented in the table below highlights a number of key variables, which in the mauritian context, define parental involvement. Among all variables which can potentially influence the education of children, a selection was made based on the literature review. One core indicator of two “forms” of capital was identified. Financial capital was measured in terms of the provision of financial resources; human capital in terms of coaching for homework and helping students to set targets; cultural capital was interpreted on two key indicators helping children to set targets and providing encouragement and lastly, the indicators for social capital were not related to parental involvement by their very definition.

	Highest Attainment				Total
	Primary	Secondary	Technical	University	
	FATHER				
Providing financial resources	19.3	25.9	27.0	27.8	100.0
Coaching for your homework	5.2	30.6	32.7	31.5	100.0
Looking for private tutors	12.6	30.1	28.0	29.3	100.0
Providing encouragement	12.7	27.1	29.8	30.5	100.0
Helping you to set targets	7.2	28.0	31.4	33.4	100.0
Helping you plan your career	12.2	27.9	28.5	31.5	100.0
	MOTHER				
Providing financial resources	21.0	25.1	26.8	27.1	100.0
Coaching for your homework	7.7	28.4	31.0	32.8	100.0
Looking for private tutors	8.4	27.4	31.9	32.3	100.0
Providing encouragement	15.4	26.0	29.2	29.4	100.0
Helping you to set targets	9.8	27.3	31.3	31.6	100.0
Helping you plan your career	9.3	29.2	30.0	31.5	100.0

The pattern produced by the data clearly reveals that:

- (i) higher levels of education of parents is often associated with better provision of financial resources though the gap is less than 10 percentage points.
- (ii) the two indicators which revealed the highest gap in relation to parental educational attainment were those related to human capital (coaching and helping to set targets and planning career)
- (iii) the pattern for fathers and mothers does not necessarily follow a similar trend across categories.

The gap is pronounced when comparison is drawn between parents with only primary education and those with secondary and tertiary education. The discrepancy between the last two categories is not substantial in terms of percentage points although, parents with tertiary education score highest on all the indicators mentioned.

For parents with primary education, the indicator which has the highest percentage response is on provision of financial resources. For those with secondary education, the focus, on average, is on direct coaching whereas for parents with highest attainment, emphasis is placed on setting targets and helping children plan their career. Such varied parental intervention has significant implications in terms of relationship between parents' own education level and the perception of their roles. A number of such interrelated issues will be delved into at the time of interview and general discussion.

Additionally the table below also reveals an interesting data on parents' educational level and parent-teacher relationship. Though the statistics are not related to the frequency of parents' visits, it does point out to the fact that the more educated parents are the more likely they are to meet the teachers of their children.

E d u c a t i o n a l L e v e l o f p a r e n t s					
	Primary	Secondary	Technical	University	
% of parents meeting teachers	0.23	27.74	23.72	48.32	100.00

7.11 Intergenerational Mobility in terms of educational attainment

Fam Members	Edu Level	Highest Education Achieved by Respondent				
		Primary	Secondary	Technical	University	Total
Father	Primary	6.3	50.4	18.9	24.5	100.0
	Secondary	0.6	43.4	17.2	38.8	100.0
	Technical or Other	0.0	28.8	22.5	48.8	100.0
	University	0.0	27.4	21.1	51.6	100.0
Mother	Primary	3.4	50.7	17.9	28.0	100.0
	Secondary	1.5	39.0	18.4	41.1	100.0
	Technical or Other	0.0	33.3	20.5	46.2	100.0
	University	0.0	14.3	11.4	74.3	100.0

The table above illustrates the following findings:

- there is a positive relationship between the level of attainment of parents and that of the respondents; the higher the educational attainment of parents, the higher the attainment of the respondents.
- Mothers' educational attainment has a stronger influence than the fathers' educational attainment at the level of secondary education.

The table shows that the attainment of grandparents also positively impacts on the attainment of respondents.

Fam Members	Edu Level	Highest Education Achieved by Respondent				
		Primary	Secondary	Technical	University	Total
Grandfather (P)	Primary	3.9	45.0	16.8	34.4	100.0
	Secondary	1.4	41.4	15.7	41.4	100.0
	Technical or Other	0.0	39.1	34.8	26.1	100.0
	University	0.0	11.1	33.3	55.6	100.0
Grandmother (P)	Primary	3.9	42.8	19.0	34.3	100.0
	Secondary	0.0	39.3	23.2	37.5	100.0
	Technical or Other	0.0	70.0	10.0	20.0	100.0
	University	0.0	0.0	50.0	50.0	100.0

The questionnaire also comprised of a number of open ended items. Such items were further divided into two categories. The first one consisted of stand alone open-ended questions (Q 16, 21, 22, 23, 29) and the second comprised of a close ended (Yes/ No), followed by an open ended section requiring elaboration (Q 19, 27, 32, 34, 35, 36, 38(a), 39, 41, 42, 43, 45, 46, 47, 48). However, not all open ended items were filled by a statistically valid number of respondents and were, as such, not processed.

In the following sections the major analysis will be presented

7.12 Role models (Question 16)

Role Models of Respondents	%
Teacher	27.6
Father	16.3
Mother	6.1
Brother	3.8
Sister	27.6
Uncle	3.2
Aunt	1.5
Cousin	4.1
Peers	5.5
others	4.4
	100.0

7.12.1 Parents as Role Models

The question dealt with the identification of a role model and the impact of the role model on the respondent's life. The most common role models identified were the parents. The father figure had a significant positive role on the respondent's general outlook and expectations of life. **Fathers have a strong impact when they display positive attitudes towards work and values such as patience and perseverance.** The following response reflects typically what a number of respondents felt:

"my father who was a perfect example of a hard worker."

The achievements of the father, not necessarily in monetary terms, but rather with the respect to the relative progress made also inspired the respondents as shown by the comment:

"My father started from nothing to be where he is today."

An interesting observation related to the frequent comments of respondents regarding parenting style of fathers. **A number of responses indicated that "strict" fathers who set high standards may well have had positive impacts on their children.**

Furthermore, the perception of the participants highlights the view that **the personality of the father leaves a significant imprint on children.** The father's personal actions and ambitions translate and

colour children's own perception of what is good and desirable. One respondent pointed out that he admired and wanted to emulate his own father's attractive personality.

"My father is an open, intelligent and outgoing person... He is elegant in his speech and has a great personality."

The father's ability to act as an academic role model by direct coaching was also pointed out. A few respondents also highlighted the fact that their fathers equipped them with occupational skills and acted as a vocational mentor by teaching them the skills required for their current job.

Respondents who identified their mother as their role model emphasized the **devotion and commitment** displayed. The caring attitude of mothers coupled with their hard work in the face of difficulties was a source of inspiration. It was interesting to note that the educational levels of mothers **per se** was immaterial; respondents seemed to be sensitive to the implicit values which guided the behaviour and actions of their mothers as illustrated by the following comment:

"My mother was a widow but a real fighter and a lady."

Mothers' ability to talk about the future and encourage their children to be educated despite their own illiteracy was a significant factor.

7.12.2 Teachers as Role Models

A substantial number of participants identified teachers as their role models. There seems to be two sets of reasons why teachers were chosen as role models. On the one hand, they may have had a personal influence because they had established a personal relationship with the respondents and played a key role in helping them to make life decisions. On the other hand, they may have had such strong personalities that respondents found in them qualities worthwhile of emulation as evidenced by:

"My art teacher. His work always influenced me to become someone like him."

The following comment also illustrates the point that teacher's ability to demonstrate a caring attitude and a genuine interest in the lives of students has a long lasting impact on individuals:

"My GP teacher gave me a lot of encouragement and backed me in all my personal problems."

7.12.3 Other Role Models

The third category of role models can be further distinguished into two sub categories: Relatives and Peers/ Others

The relatives would include siblings, uncles, aunts, cousins and grandparents who make up one subcategory. What the data prominently projects is the influence of the elder sister on educational achievement and trajectory and set it at par with teachers. The comments from respondents as stated below:

"My sister who was always a step ahead of everything." ... "she was motivated in whatever she did....she was always a step ahead..."

The educational and professional achievement and attainment of these role models have motivated respondents to set their own targets and adopt similar patterns of behaviour in terms of engagement and involvement in education. The educational success of siblings and relatives seem to have created positive expectations of schools and education on younger children in the family. It has contributed to establishing a particular culture of studying in the home environment.

“my uncle’s success motivated me to target high. I was encouraged by his great success at work. My cousins were also influenced.”... “ My cousin had a BSc and I followed his path.”

Some of these role models also had a more concrete role and helped the respondents in their studies by coaching or providing timely advice:

“my uncle always checked my results and talked to me about my progress.”

A number of respondents also attribute importance to peers as positive role models. Peers own success at school and in life generally served as a guiding force. Peers have a privileged position insofar, as they share the same school environment and have the same interest and concerns.

In the last sub category, the respondents have cited a number of role models which either may be public figures whose own life histories and personal charisma have made them worthy role models or colleagues who, by their discipline and determination have had a positive influence.

7.13 The Role of Peers (Question 21)

Question number 21 required the respondents to describe the ways in which their peers have influenced their education.

Role of Peers	% of Total Response
CO: Collaboration	42.0
CM: Competition	14.4
NE: Negative Expectations	8.5
PE: Positive Expectations	7.7
SHP: Shared Hobbies Positive	1.6
SHN: Shared Hobbies Negative	0.9
PV: Peers values	4.6
FE: Further Education	14.6
RM: Role Models	5.7
	100.0

For the purpose of analysis the responses have been broadly classified as positive and negative. This question was not answered by all respondents but the data is rich enough to provide an interesting insight in the role of peers.

A larger proportion of respondents identified peers as having a positive influence on their education. The direct academic influence was in terms of providing opportunities for both competition and collaboration. Positive peer influence is often captured in the following comment:

“the more successful ones instilled a sense of competition in me... it was a sort of competition which led us to better performance...”

A significant number of respondents pointed out that friendly competition enhanced their learning opportunities at school. Competition and collaboration were not necessarily mutually exclusive and healthy competition was a source of motivation. Collaboration took the form of exchange of notes, group work, and even sharing books when financial means were insufficient to meet the costs of buying books. Sharing of reading materials and books is often considered to be one of the key activities of peers. Many reported that academic discussion among peers which lead to exchange of views and ideas helped to improve their performance. High achievers in the group also served as role models for others and often acted as leaders motivating others by their discipline and hard work to follow suit as exemplified by the following comment:

“by exchanging views on different topics helped us to improve which led to progress and success.”

However, the influence of peers goes beyond the academic realm. Even within the school setting, peers shape attitudes towards schooling, and education, in general determine the value an individual will attach to education. Involvement in school activities and the general expectations about what is to be achieved through education is heavily coloured by the perceptions of peers as illustrated by the following:

“I was motivated to participate in retreats, preparing morning assemblies at school... we grew up together and shared the same attitudes towards certain subjects and activities as well as social life.”

More importantly, peers also help the individual to decide about his own values and principles and, as such, definitely impacted on their view of life. With the collaboration of peers, children and adolescents learn to set targets for higher education and ultimately a career. The constant dialogue which prevails in the community of peers, which often extended beyond school hours, was perceived by the respondents as a means to articulate and share their worries and concerns. What also emerged from the open ended items on the role of peers was that they offer to individuals an opportunity to diversify one’s own perspective and to move progressively beyond the confines of family expectations to a more realistic assessment of reality.

“my peers were very dedicated students and they had far reaching visions- I too wanted to move ahead in life and education was essential for this.”

The peer group acted as a network providing support, in some cases even financial assistance. Many derived from the peer group the intellectual and emotional resources to face school life and personal problems as well as the stress generated from expectations at school as shown by the following:

‘... they helped me overcome my grief and sorrow which impacted on my education...’

An individual’s study habits were also determined by the practices of peers. Observation and dialogue seem to be the privileged means through which the peers acted as educators.

However, for some respondents, peers had a negative influence on their education insofar as the general expectations of schools and life did not really match the culture of the school. When peers have poor expectations of school, they tend to project the image of school as tedious and unrewarding. The peer group then offers alternative activities to school life resulting in truancy and eventual dropping out, as illustrated by this comment:

“ My best friend stopped at Form II and I followed her when I was in form III. Most of my peers stopped school at an early age and I followed”

“ my friends influenced me to play truant...”

Most respondents believe that peers had a definite influence on their education and school trajectory in particular. The peer group, in its best form, is a close knit community which offer strong support to school life.

Indeed, peer influence has been a significant factor in terms of enabling collaborative development of a value system. The data supports an ecological understanding of the peer group whereby individuals construct their philosophy of life and the importance to be attributed to achievement and education. Using Brofenbrenner’s analysis, it seems that peers assume an important psycho-social function by acting as a mediator between the family and the wider social circle. It is in the crucible of the peer group that philosophies are adopted, that family problems are shared and understood.

7.14 Parental Involvement (Question 38(a))

Reasons for parents meeting or not meeting teachers	% OUT OF TOTAL RESPONSE
PRA: Progress report Academic	60
PRB: Progress report behaviour	2
PT: Parents’ trust	7
NT: No time	21
NM: no motivation	8
TT: tuition teachers	1

This dimension was investigated in question number 38(a) and a few other close ended items. The question required respondents to describe the reasons or purpose of parents meeting teachers both at primary and secondary levels. The aim was develop an understanding of parent- teacher relationship in relation to parents’ own initiative to meet teachers and the subject of these meetings. The responses point to a distinct typology of parental involvement in the education of their children as indicated by the relationship maintained with teachers. On the one hand, the responses were categorized in terms of three different types. They were further distinguished along the lines of positive or negative involvement or non-involvement.

7.14.1 Positive Parental Involvement

Three levels of positive involvement were identified. The lowest level of involvement relates to parents attending the annual or bi- annual PTA meetings to keep themselves abreast of the requirements of school life and the child’s performance and this type of involvement has been termed as **“Mechanical/ Routine”**. Frequent responses in this category were on the following lines:

*“They attended PTA meetings and came to collect my report books.” Or
“they were called for meetings by the school.”*

This represents the minimum expected involvement of parents and is considered as compulsory by the school. The open day was mentioned but, by a lesser percentage of respondents.

The second level of involvement relates to parents taking initiatives to meet the teachers and to discuss matters pertaining to academic performance and to monitor the child’s progress. Such involvement operates on the lines of an **Academic Rationalist** model. The typical responses were as follows:

“They wanted to assess my performance and progress.” ... “ to make sure that I was studying” ... “to assess my progress at school” ... “to gauge my capacities and seek advice for improvement”.

The third level of involvement described parents who met teachers on their own initiative to discuss, not only, about academic progress but also children’s behaviour at school. Such parents sought to establish a personal relationship with teachers. It is clear that some parents viewed the establishment and maintenance of such relationship as crucial to the education of their wards.

“to get feedback on discipline at school”.... “ to follow my progress and see if I was behaving properly at school.”... “ to get to know the teacher.” “ for the teachers to have a greater consideration for me.”

Such involvement has been termed as the **Pro-Active and Infomed model** where it is clear that parents considered education in the fullest sense of the term as ‘serious business’.

7.14.2 Reactive Parental Involvement

The term reactive here has to be cautiously interpreted. This category includes all those responses where parents became involved because of their wards’ improper behaviour, truancy or other acts of indiscipline. Involvement was involuntary in the sense that parents were compelled to meet school staff for fear of sanctions such as rustication or suspension Or, alternatively, parents reported to schools in order to complain about teachers and perceived acts of injustice committed by the school or staff . The reasons given were as follows:

“Because they (the teachers) were practising “communalism” at school” “I was playing truant”... “for disciplinary reasons”.

7.14.3 “Informed” parental non involvement

The inherent paradox can be explained in terms of the fact that some respondents believed that their parents were not involved because they had good records for both academic behaviour. There was no reason for their parents to meet teachers. Implicit in this perception is the idea that parents should meet teachers only for the purpose of monitoring academic progress. Some respondents claim that their parents trusted them and thus did not feel the need to meet teachers. The family ‘culture’ in terms of learning approximated the culture of the school as illustrated by the following comments:

“My parents were already helping me with studies at home since they are in the educational field.” “There was no reason for meeting teachers, parents had entire faith in us.”

7.14.4 “Negative “Parental non involvement.

The most common reason given for parental non-involvement was lack of time. Respondents, recurrent comments, are exemplified by the following: *“They were busy working...” “They worked hard and had no time”* demonstrated that external factors were held accountable for lack of parental involvement. However, a number of respondents also highlighted the fact their parents did not understand the importance of education and, as such, did not understand the importance of education or show interest in the school or their performance. The fact that they were illiterate further compounded the problem. Parents’ illiteracy not only explained their lack of interest but created a barrier between the parents and the school as illustrated below:

“My parents’ lack of education was an obstacle for them to meet the teachers”

Instability in the family background also interfered with parents involvement insofar as the issue of education cannot be considered as a priority when *“parents were busy fighting”*.

The continued absence of a parental figure at home was also often cited as reasons explaining non-involvement of parents. In a number of cases, the situation was eased off when an uncle, brother, or sister fulfilled that function. *“My uncle came to see my teachers to see if I was working at school”*.

Furthermore, a number of respondents placed the responsibility of taking the initiative on the school; the following statement:

“The school never took the initiative to convene parents” illustrates the expectation that it is the prerogative of the school and teachers to call parents rather than parents taking the first step. This is in sharp contrast with the perception of another group of parents, who believe it to be both a right and responsibility to meet teachers and inquire about the educational progress of their child.

An issue which must be addressed here relates to the schools’ roles and functions. The data points out that schools are construed on a *Gesellschaft* basis, that is, it operates on contractual lines. However, current literature reveals that effective schools function rather on the *Gemeinschaft* mode, that is on communitarian basis and, as such, actively seeks to involve parents in the education of their children (Meyer: 2001)². How far do schools today consider it their prerogative to build bridges with their parents? Is it not high time to think in terms of opening the doors of the school to the parents?

7.15 Parents’ perception of their role (Question 42(a))

Question No. 42(a) dealt with respondents’ perception of their role as parents in the education of their child.

² Meyer, S. (2001) Yizo Yizo, is that it? Thoughts on the role of South African Schools in Moral education. Paper presented at the South African Education Development Conference, Gaborone

Parents' Perception of their Key Role as Parents		%
AA:	Academic achievement	5.6
P:	Personality, values	12.5
N:	Attend to needs	15.4
GS:	Guidance and support	22.1
C:	Care, love and affection	12.1
LA:	Life achievement, job	7.0
AD:	Autonomy, dialogue	0.1
RM:	Role model	10.6
F:	Financial support	14.6
		100.0

The responses can be classified in 3 broad and overlapping categories: (a) To secure good academic performance and professional success (b) To make a complete person that would be useful to society (c) To enable the child to find happiness and lead fulfilling lives. In theoretical terms the above categories are also revealing of a particular position with respect to education which can be further analysed as :

- (i) Academic Rationalist
- (ii) Humanistic
- (iii) Instrumentalist

7.15.1 The Academic Rationalist - Educational and Professional Success.

Most parents consider their role as being primarily related to providing “all facilities” to further the education such as money for meeting all educational expenses mainly books, materials, fees for private tuition and sponsoring university education. Their role is also defined in relation to providing a home atmosphere conducive to learning and the intellectual scaffolding to ensure that their children have access to the intellectual resources necessary for academic success.

A number of respondents also claimed that being strict and instilling a sense of discipline was their priority. Equipping the child with the skills and knowledge to choose a career and become a successful professional is also highly rated as a parent's role. It has also been noted that the issue of social mobility was recurrent a number of respondents pointed out that. *“To provide my son with education facilities that I did not have access like secondary education ...” “encourage her to pursue higher studies than I did ...”* There is also a shared feeling that children should be given all the support to achieve to their best potential and implicitly to ‘do better’ or ‘achieve more’ than their parents. What was interesting were the dissonant responses obtained underlined the need for parents *“to make education and learning as pleasurable and essential” “not as a boring and uninteresting matter”....“To help the child identify his goal and re-evaluate in at regular intervals...” “.. To keep in touch with teachers.”*

The view that parents are simply passive enablers in the education of their children is held by a number of parents, although, quite a few believe that they should provide some form of scaffolding rather than simply determine the benchmarks.

7.15.2 The Humanist: To make a complete person

“To be a guide for my child... To inculcate values like love, honesty, responsibility, humility and happiness etc... To be a good citizen... To develop skills of her own interest like sports, dancing etc.”

The above comment is typical of the number of responses where the emphasis was on enabling children to develop intellectually and morally. At the root of respondents’ concern, was to make children ‘good’ and ‘useful’ citizen. As opposed to the previous category of response which focused on individual benefits of education, here the social aims of education are emphasized. The means of realizing that objective were also spelt out, and, generally, maintaining good communication channels with one’s children was often cited as being the hallmark of good parenting coupled with providing love and caring home. There is to a general assumption that, not only must the intellectual and financial resources be given, but also, the emotional and moral resources to tackle with the demands of adult life.

Unlike the pedagogy of direct coaching which was prominently emphasized in the first category, an observational learning approach has been suggested by a number of respondents. Acting as a ‘role model’, ‘talking to my child’, ‘listening to him’, answers which pointed to a particular philosophy and approach to child rearing and perception of education which is more humanist. One parent emphasized that:

“Guide him but give him enough space to breathe so as he can make his own choice.”

The educational success of the child is perceived as being instrumental to a ‘character formation’ agenda. The belief that education is central to make a complete person is grounded in a philosophical perspective which emphasize the belief that it is only through education that both the individual and social aim of education can be achieved.

7.15.3 The Instrumentalist: Being Happy and Leading fulfilled lives

Some respondents have even gone a step further to state that:

“To see that my children grow up as good human beings with good qualities and that they are educated and can be responsible with high objectives”

Inherent in the various perspectives is the belief that education is not only important for leading ‘dignified’ existence but is also a means of achieving a higher aim which, according to participants, could either be ‘spiritual’ or ‘moral’ as evidenced by “*strong principles*”, “*sound base for sense of responsibility*”. A different aspect of educating one’s child with the aim of enabling him/her to lead happy lives related to the notion of exploring one’s talent and making one’s own choice. The most concrete way in which respondents believe they can achieve this aim is by ensuring that the child feels secure and happy at home. A mixture of both discipline and dialogue can be adopted.

7.16 What did teachers say about education? (Question 47)

Question 47 dealt with teachers' discourse in the classroom, in particular and the discourse on the value of education. The statistics are given below:

Teacher's Perception of Education (Response category)		% of Total Responses
J-Job:	Career, work related	37.1
SM:	Social mobility, better status, pride etc	11.7
C:	Citizenship, member of society etc	3.1
BL:	Better life, key to success etc	37.0
IVK:	Intrinsic value of knowledge	2.2
AF:	Autonomy, Freedom	2.7
P:	Personal Growth	6.1
		100.0

Given the influence of teachers on children generally, it was deemed important to investigate how the latter's may have impacted on the child's perception of education by shaping his/her expectations and aspirations of life and the link the teacher may have helped him establish between education and life.

Teacher's discourse on education can be understood from two different outlooks both similar and comparable to parents' understanding of their role in the education of their wards. On the one hand, teachers explained that education was the only "passport" or "key", "door" to success. The notion of success is related to twin perspectives of "economic" achievement measured by eligibility to a 'good' job and 'social' success (in terms of the recognition and status given by to those who have "educationally" achieved). On the other hand, education, in its transformative function was also highlighted, insofar, as life would not be complete or "worth living" if one was not truly educated.

7.16.1 Education as the door to success

Among the most commonly cited teacher's interjection regarding education, is the idea that education is the only door/key/passport to success. The job related aspect is strongly brought to the limelight in an outcome-oriented approach to education. The correlation between high academic achievement and access to high status job was now and again emphasized as illustrated by: *"If we had no education, no certificate we would not be able to find a job and be unsociable"*, *"They encouraged us to study and become a professional"*, *"Simple: Outside it's the jungle, and without a good education we are nothing"*, *"They always talked about education especially when homework was not done"*. Coupled with this, is the patriotic appeal that some teachers made to students reminding them of their expected role and functions as citizens and the expected rewards on parents' sacrifice and investment. The main aim of this discourse was to build motivation and gain support for the teaching and learning process whenever there were signs of flinching effort by reminding students of the aim of education. Firmly anchored in this discourse, is the belief that education is the only means of ensuring a brighter future. A life without education was depicted as gloomy and hopeless exposing the individual to social evils.

7.16.2 The Transformative Agenda of Education

Respondents also highlighted the fact teachers referred to education as a means of transforming them into better individuals.

“Education can help to model, to form the personality, character of what the person would be in the future...”, “Importance of virtues of education, how it can enable us to come out of the world of ignorance”.

The general trend is that teachers presented education as a means of social and personal uplift. They often compared people with different levels of education to show the difference in lifestyle. By depicting the characteristics of an ideal to which students must strive, teachers supported students in defining their targets for the long term.

Though relatively few teachers highlighted the transformative agenda of education, the data firmly establishes that teachers do convey fundamental values and beliefs about education. Their own philosophy of life and education colour their students’ perception.

7.17 Discussion

The data produced by the questionnaire provide a useful insight on a number of factors which affect the individual dispositions towards education. Three key factors have been investigated: the family and the peers and one crucial classroom factor: the teacher. The findings aimed at generating concrete understanding of how these dimensions represent the human, cultural, social and financial capital.

7.17.1 Financial Capital

Most middle-class parents tend to view education as being primarily a means of mobility. The overriding importance given to financial capital and the historical mauritian context, leads us to believe parents’ own deprivation during childhood could explain their emphasis. The fact that respondents view this form of capital as a necessary condition on which educational resources depends indicate the predominance of the perception that education requires primarily investment in terms of fees, books and school materials. Unless financial resources are available, other forms of capital can hardly make a significant difference on the educational trajectory of children. The issue of private tuition, has an added significance because private coaching is perceived as an important determinant of achievement. The family is construed as the only source of financial capital. Only in very few cases, do respondents refer to alternative sources of financial capital. A number of respondents also pointed out that lack of financial capital was the cause of their low educational achievement.

7.17.2 Human Capital

For the purpose of this study, the concept of human capital was initially taken to refer to parent’s ability to contribute directly to children’s learning. The study reveals that human capital is perceived by respondents as being an important aspect of their role as parents. However, for the respondents themselves, their basic source of human capital was not their parents but their peers. One plausible explanation resides in the fact that many parents were not even literate at that time, and children, naturally turned to the most accessible source of human capital outside the formal school setting. Even when parents are educated, there is no guarantee that they will have the knowledge or inclination as the child proceeds to higher levels, to engage in cognitive modeling or coaching.

Additionally, human capital may also originate from the home environment without necessarily referring to the parents' economic background. An uncle, elder cousin or fit role model can effectively fulfill that function. While the sources of financial capital are confined to the home and in many cases, considered as the responsibility of the father, children look up to other significant others in diverse social spheres for learning support. The synergy within a peer group can serve to enhance the child's ability to succeed. Good role models available within the group of peers or within the extended family and even the wider community can make a difference in a child's achievement.

However, the above claim must also not discount the fact that parents' role remain significant at other levels. 22% of respondents still view their parents as a role model, a source of inspiration and motivation. During the most formative years, it has been established that parents play a crucial role in the education of their children (Redd et al: 2002) and the findings point very strongly to the centrality of both parents and immediate environment of the child (the micro system) as determining access to human capital.

7.17.3 Cultural Capital

The focus, in the context of the present study, is on possible home practices which impinge upon the skills the child brings to the learning process. The findings reveal a wide range of practices which corroborate to a limited extent with the theoretical framework posited. The role of the family in creating as many affinities as possible in the school has been stated in both close and open minded items but the emphasis is not so much on setting reading and linguistic habits, but rather, on the creation of a positive home atmosphere. In the questionnaire, it has been clearly highlighted, especially in the open ended items that even though the family did not provide for an academic culture, it did produce an atmosphere which was conducive for learning. An interesting observation relates to the ability of some parents to prepare their children to accept the culture of the school because they have an understanding of the ways in which the organization functions together with a knowledge of its expectations and aspirations. When parents succeed in maintaining ties with the school, this reinforces and perpetuates home practices which support school practices and vice versa. However when cultural practices at home do not match those of the school, the chasm is likely to increase as parents are not culturally equipped for school involvement and hence, cannot be of help to their children.

7.17.4 Social Capital

The indicators of social capital assessed in terms of the networks within families and larger communities clearly indicate that educational achievement is also dependent upon the resources (Information, support, models) and norms generated by the latter. Indeed, few respondents reveal that they were self-driven. Most respondents pointed to key role models in their immediate social environment who provided essential direction or information on career or educational opportunities. The other groups in which the child and parents had membership also defined the norms and expectations with respect to the education of children. There is ample evidence that adults outside the family did have; in many cases, a lasting impact on education especially when parents, who because of their lack of education were not in a position to guide their children. In a nutshell, social capital has been, historically from the late 80s onwards a crucial element furthering the educational agenda across all social classes. The specificity of the Mauritian context in terms of proximity in social relations and people's active involvement in community groups and activities have permeated family lifestyle. The findings show an unexpected level of conformity in parents regarding the perception of their role in the education of their children.

Chapter 8

Interviews

8.1 The Purpose of the Interviews

In total, there were 17 participants, 10 men and 7 women in the interview phase, 13 providing personal in-depth interviews and 4 providing the general historical background information. Given the theoretical orientation and purpose of the study, the aim was not to gather data from a large sample in order to be able to generalize but, rather, to develop an understanding of the indicative factors which influence an individual's drives and expectations in terms of their achievement and success.

The interview offered some insight into an aspect which was not adequately addressed in Phase I of the study: the ethnic dimension. The interviews offered the possibility to investigate the processes through which macro and meso level influences were translated at the micro-level of the family and neighbourhoods.

It is to be acknowledged that academic experience and educational achievement are not the exclusive factors to impact on the twists and turns of an individual. However, it cannot be denied that, as per collective beliefs, the scholastic journey has an undeniable influence on life patterns. The forthcoming set of inboxes, depicting a sample of Mauritians having differently faced the system, is an attempt at illustrating the theory that builds a bridge between academic achievement and life trajectory.

8.2 Profile of Participants - Category A

Profile: Participant A

The Quiet fighter

Sex	Male
Age	38
Ethnic group	Asian (Muslim)
Geographical location	Sub-urban Plaine Wilhems Urban Plaine Wilhems
Educational background	Completed primary education only
Category	Low Educational Achievement High Life Achievement
Personality Type ¹	Introverted/ Stable

LIFE HISTORY SUMMARY

The participant comes from a reconstituted and large family which lived in a two roomed house. The family faced stringent economic conditions that characterized life in Mauritius in the 70s. The mother lost her husband early and remarried. From the interview it was clear that the mother had a significant influence on the value system of the participant. She was also self-employed and manufactured “dholl puri”. Being the eldest son, he was compelled to leave school before completing his primary schooling to help the family economically. He took employment as a worker in a tea plantation at Highlands and developed health complications. Given his fragile health state, he had to give up employment. He took up apprenticeship with a shoe maker and learnt his trade. Ultimately, he set up his own enterprise and his business flourished.

¹ The personality type is classified based on a trait approach to personality of Eysenck (Pervin, L.A., 1984. Personality Theory and Research, 4 th edition, John Wiley and Sons)

Profile: Participant B
The Ceiling Breaker

Sex	Female
Age	32
Ethnic group	Creole
Geographical location	Rural South
Educational background	Holds an MA and is currently enrolled on a Ph.D
Category	High Educational Achievement Moderate life Achievement
Personality Type	Extrovert/ Stable

LIFE HISTORY SUMMARY

Faced difficult family circumstances with 4 other siblings with varying trajectories. Her father was employed on the sugar estate as artisan remunerated at low rates and her family suffered from harsh economic conditions of the 1970s characterized by high inflation rates and unemployment. Her parents held a set of values entrenched in traditional views of women and work and also loyalty to the employers on the sugar estates. Her brother is now employed in the same company as her father. The mother took up dress making to supplement the meagre family income. Her own studies were discontinued owing to the fact that brothers had to complete their SC but her brothers did not have the same educational trajectory and stopped at HSC. Those were difficult moments for her because she was motivated but sacrificed her education- lack of school materials etc- which she fortunately continued later on. No real role models because aunts and other female relatives have faced difficult circumstances and she absolutely did not want to have the same lives as her aunts or mother. Her sisters were more successful academically and earned their degrees and established themselves in the UK. Her brothers, though they completed secondary schooling fitted more with the expectations of the family. She started her professional life early at the age of 18 in an enterprise as a supervising manager. It was a community-based enterprise but it eventually closed down with the setting up of the EPZ which absorbed the labour force. After having worked in that enterprise for 13 years she was left without any compensation and started to get interested in socio-religious work and organizations namely Caritas and the literacy programmes. She also started to get involved with difficult cases such as the families of prostitutes and managed to help one of them get out of the vicious circle. Her own determination was motivated by the need to struggle continuously to escape the hard lives led by her relatives especially the female models in her family. There was an expectation that she would more or less get “a good” job and settle in the kind of life that tallies more with the expectations with the culture of the family. Eventually she became employed at a college in the South as a social worker and managed to combine her twin pursuits of education and social work. Her own passion for social work was triggered by the fact that she witnessed the “near-slavery” conditions in which people were living and working and the latent racism that characterized class interactions. Her own personality was fashioned by her own innate characteristics and the people she met along the way as well as her own personal readings during the course of her study. She describes herself as a person with great lucidity, enriched by reading about the lives of personalities and thinkers. The influence of religion became predominant at one stage of her life where she considered that religious engagement would provide her with the opportunity to be useful and of help to others as well as her own personal fulfillment.

Profile: Participant C
The Systemic Misfit

Sex	Male
Age	40
Ethnic group	Asian (Hindu)
Geographical location	Rural East (Childhood) Rural East (Currently)
Educational background	HSC Holder
Category	Moderate Educational Achievement High Life Achievement
Personality Type	Extrovert/ Unstable

LIFE HISTORY SUMMARY

Comes a fairly large landed rural family involved in cultivation of vegetables. The family gradually expanded its economic activities to marketing their products. Siblings were as ambitious as himself, and, till today manage the cultivation business. Formal education is scanty and participant dropped out at the level of form IV. He took up employment in a school but this was short-lived because he promptly returned to the world of business. His business is today one of the leading Mauritian enterprises and is continuously expanding. His entire family is involved in the business and his own children have been inducted quite early although he firmly believes in the need for formal higher education. The family was also at one point (and still probably) involved politically and socially at the level of socio-religious organizations. Has faced difficult conditions in childhood and started work early with his parents. Set up his enterprise by branching off the family and starting on his own anew.

Profile: Participant D
The Family Emancipator

Sex	Female
Age	29
Ethnic group	Asian (Chinese)
Geographical location	Sub- Urban (Port- Louis) Urban (Plaine Wilhems)
Educational background	HSC Holder
Category	Moderate Educational Achievement High Life Achievement
Personality Type	Extrovert/ Unstable

LIFE HISTORY SUMMARY

Comes from a traditional Asian family with fairly aged parents. Is the last born of four children. Family relationships were at times difficult with a number of conflicts among siblings. Individuated early from the home and asserted herself in school life through co-curricular activities. Limited educational achievement till HSC and then started her own business and eventually opened her own trendy clothes shop. Now travels extensively and leads the life that she has always wanted. Enjoys a full social life and a job which gives her ample opportunity to be in contact with people. Her debut in the world of business was a struggle despite the fact that some capital was provided by parents. All other siblings are settled and have either taken employment and she is at present staying with elderly parents who are both under her care. Is extremely hardworking although she claims that she does not feel the pressure because she “could not live her life any other way.”

Profile: Participant E

Jack of all Trades and Master of Many

Sex	Male
Age	35
Ethnic group	Creole
Geographical location	Sub- Urban (Port- Louis)
Educational background	HSC Holder
Category	Moderate Educational Achievement High Life Achievement
Personality Type ¹	Internationally acclaimed hairdresser with an outgoing and flashy personality with a strong sense of self Extroverted/ Stable

LIFE HISTORY SUMMARY

Background: Comes from an extremely modest family residing in one of the suburbs of Port- Louis. He has never envisaged moving out despite the fact that he can because he is strongly attached to his roots. Is the eldest of a family with three children and has at an early age taken charge of his younger siblings. Was academically brilliant and cleared his HSC with flying colours. Aspired to become a lawyer but soon dropped the idea because of financial constraints. He was appointed as a policemen and worked for eight years, while at the same time, beginning to practice his trade for which he had a natural inclination. The family had a small pig rearing business which he expanded and managed sidelines with his formal employment. His talent, as a hairdresser was promptly recognized and acclaimed. He refined his skills by following a number of training sessions abroad- an investment for which he is now very proud. Firmly believes in the value and worth of education and ensured that all the members of his family continue till the maximum their formal education. He is personally sponsoring one nephew and niece for their higher education in France. He has always taken charge of his parents and has a special relationship with his mother whom he considers as a friend and a confidante.

The participant has an acute business sense and has expanded his enterprise to real estate and car renting which are both also flourishing.

Profile: Participant F
The Silent Rebel

Sex	Female
Age	33
Ethnic group	Asian (Hindu)
Geographical location	Sub- Urban (Port- Louis) Urban (Plaine Wilhems)
Educational background	Degree holder (ranked just after laureate)
Category	High Educational Achievement Moderate Life Achievement
Personality Type	Extrovert/ Unstable

LIFE HISTORY SUMMARY

Comes from a stable middle class sub-urban family of two children an elder son and a daughter. The family owned a small business in the capital but later moved to the Plaine-Wilhems. The elder son is an engineer and the participant won a scholarship to India after brilliant academic performance at HSC level. She completed her BSc in Maths and worked in a private school before being appointed as Education Officer soon afterwards. Often perceived as model of educational success in her family, she has, however, in the perception of others professionally underachieved. Her own philosophy of life is strongly influenced by her spiritual orientation. She is independent, and self assuming and refuses to be bogged down by conventions despite the fact that she comes from a traditional family. Her own painful personal experience has shaped her character and made her stronger. Her priorities are well set even though this causes a number of occasional conflict with her mother who still believes that she can “fit in”. Well liked by students and peers and professionally appreciated, she has successfully overcome the turbulent years of her personal life. However, she is also coming to the realization that there are limits to what she can achieve here given the economic and social circumstances.

Profile: Participant G
Success Mother Made

Sex	Male
Age	40
Ethnic group	Asian (Hindu)
Geographical location	Rural North
	Sub- Urban (Port- Louis)
	Urban (Plaine Wilhems)
Educational background	Degree holder (MBA, BSc)
Category	High Educational Achievement
	High Life Achievement
Personality Type	Introvert/ Stable

LIFE HISTORY SUMMARY

His father left his mother when he was five months old. This separation marked a turning point in his life and his mother then moved to a sub-urban neighbourhood. Though the lifestyle remained simple and modest, as he grew up his friendship with neighbours shaped his outlook on education and developed his taste for reading and promoted enjoyment of school life. He started working early at the age of eight by helping his mother who was employed as a labourer in the sugar cane fields. He also worked at the cemetery while pursuing his studies at school. His education was sponsored by various individuals. His professional life continued at the same time. He pursued his further education in Italy (Diploma) where he met his “foster family” who sponsored his education at the University of Mauritius for a degree, among other things. He also worked as a tourist guide and was recruited in the civil service as a technical officer; a post he held for four years before moving on to administration and pursuing his diploma and MBA. His experience of life has shaped his own outlook based on simplicity and hard work he describes himself as a keen observer and permanent learner, adopting role models who have today become leading figures in public administration. His mother has had a very strong influence on his life. His drive for success and achievement has been to a large extent motivated by the struggle his mother faced in order to survive. They share a privileged relationship till now and the mother still has significant influence on his life.

Profile: Participant H
Boat without rudder

Sex	Male
Age	38
Ethnic group	Asian (Hindu)
Geographical location	Urban (Port- Louis) Urban (Plaine Wilhems)
Educational background	HSC and Diploma
Category	Moderate Educational Achievement Moderate Life Achievement
Personality Type	Introvert/ Stable

LIFE HISTORY SUMMARY

Comes from a large upper middle class family where great emphasis has always been placed on education. The loss of his father at the age of twelve has left an imprint on him and he naturally turned to his elder brothers for emotional and financial support. Among the four brothers, he was the only one who went to study in the UK but he did not complete his law studies and returned to Mauritius. He changed his area of interest a number of times shifting from law to international studies to librarian studies over a span of 8 years. He is currently completing his BA. Despite the fact, he has a good potential, he never seemed to be able to complete a course of study or sustain an interest in a particular field for long. His own professional life however has been less tumultuous. After a short stint as a secondary school teacher, he was recruited as an administrative assistant in a parastatal body. He remains close to the members of his family specially nephews and nieces whose education he monitors and even sponsors. His social life is restricted to his family and he has few peers given the fact that he changes orientations often. In the past few years, spirituality has brought a degree of stability and peace in his life. His lack of success in completing his law studies was an acute disappointment to his family and himself personally. It seems that this event disrupted and affected for a long time his perception of self. Given the fact that it occurred at a time when his own brothers were settling down in their respective families, his siblings could not provide the required emotional support to enable him to overcome this difficult moment of his life. He suffered from a minor depression at that time and was nearly dismissed from his job.

Profile: Participant I
Gender Casualty

Sex	Female
Age	32
Ethnic group	Asian (Muslim)
Geographical location	Rural North
	Urban Plaine Wilhems
Educational background	HSC Holder (ranked 16th Classic side)
Category	High Educational Achievement
	Low Life Achievement
Personality Type	Introvert/ Stable

LIFE HISTORY SUMMARY

Her father had a small business in the catering field which will be handed over to her younger brother after he completes his studies. She describes her father as an orthodox man and it was due to her mother's insistence that her sisters and herself studied till HSC. The mother pursued her schooling till form III but was removed from school despite her promising achievement. The participant's family has been extended one with close interaction with cousins given the fact that they all resided in the same neighbourhood. She completed her SC at Hindu girls and then moved to QEC. She planned to pursue her further studies at the University of Mauritius and even was enrolled. However, she withdrew from the course after the first semester because her father was not agreeable to the idea. Her own family life was tumultuous with frequent conflicts between her parents most probably because of their different outlooks and expectations of the education of their children. At one moment, her father even refused to clear her HSC fees and she was sponsored by her maternal uncle. The influence of the mother has been significant in shaping her own outlook and aspirations. She still has not given up of pursuing her studies through part time and distance education. Once her children are autonomous, she plans to register for a course in English or French. Her husband, she claims is agreeable to the idea. Marriage has provided her with the stability that was missing in her life at her parents' home. She shares a privileged relationship with her mother and has a strong influence on her siblings who have all completed their secondary schooling. Though she does not state it overtly, it was evident that she feels a strong sense of under-achievement. A cycle which she surely intends to break with the daughters once they get into the formal education system.

Profile: Participant J
The Adventurer

Sex	Male
Age	36
Ethnic group	Mixed (Asian- Hindu and Creole)
Geographical location	Sub-urban Port-Louis Urban Port-Louis
Educational background	SC Holder
Category	Low Educational Achievement Moderate Life Achievement
Personality Type	Extrovert/ unstable

LIFE HISTORY SUMMARY

Has a knack of “getting into trouble” with people and “messing things up with his boss”. Is known among his peers as “brilliant” although he has a very scanty formal education. He changed school a number of times for rowdy behaviour and flaunting the rules. Was greatly popular among peers and some teachers also. The only son and youngest child of the family with four elder sisters, he has very fond memories of childhood and adolescence despite the fact that his father passed away when he was only 7 years old. His mother and eldest sister brought up the family and catered to their every need. Although they were modest, all the children completed school till primary level and two of his sisters completed their School Certificate. His school days have been tumultuous and he explains that he was more concerned about having fun rather than studying. Got along very well with a few teachers who appreciated him without the trappings of his mischief. Is very close to his mother and one elder sister who spent a lot of their time covering up for him. Left school after his School Certificate and was immediately interested in the then budding computer industry. Claims to have got his skill by watching other technicians and observing and learning through fun. A keen football player, he was also very much involved in sports activities at school. He has a few good school friends with whom he is still close. Enjoys a full social life both with his family and friends although, he explains he has much less time because of the demands of his business. Is also involved in a number of church activities ever since he joined the Scouts. The participant shared his aspirations of following a course on business management although he claims he is not doing too badly either without it. Is enthusiastic about his business and has applied for various sources of finance to be able to diversify and expand. Is considered to have a keen business sense by competitors.

Profile: Participant K
Royal Road Traveller

Sex	Male
Age	30
Ethnic group	Asian (Muslim)
Geographical location	Urban Plaine Wilhems
	Urban Plaine Wilhems
Educational background	BSc (Engineering)
Category	High Educational Achievement
	High Life Achievement
Personality Type	Extroverted/ stable

LIFE HISTORY SUMMARY

Comes from a well-off family; his father is a medical practitioner and the mother who is of Indian origin is a housewife. Had a very stable childhood. Did his primary schooling at Baichoo Madhoo and his secondary schooling at a “five Star Confessional College”. Was extremely popular among peers and teachers. Similarly to his elder brother, who is now a medical practitioner, his academic track record is flawless and his non-academic track record is very impressive- Braintrust, debates, quizzes and even drama. He was an active member of the Students’ Council and elected “Student of the Year.” Thoroughly enjoyed his school experiences and every now and then still visit a few teachers. Claims to be gregarious and liking “to have people around.” He enjoyed extremely friendly relationship with his father although the latter was often taken up. Travelled widely even in childhood and adolescence. Studied engineering in the UK and worked for 2 years in Canada. Has come back because of “family reasons”. The participant is very professionally ambitious and wishes to launch his own company in a few years’ time when he has acquired enough experience. He is also involved in two associations, one of which he is the treasurer. Is keenly interested in music and drama. Claims to have very liberal principles- probably the mother’s touch. She is a qualified lawyer from India although she does not practice here. The participant discussed at length about how his school life has influenced his outlook and personality. He is very culturally open minded and enjoys meeting new people. He is proud of who he is though without arrogance. Has no plans to settle down right now and is more concerned about his professional life.

Profile: Participant L
The Pink Floyd Rebel

Sex	Male
Age	34
Ethnic group	Mixed (Hindu / creole)
Geographical location	Rural
	Urban Plaine Wilhems
Educational background	Dropped out at Form IV
Category	Low Educational Achievement
	High Life Achievement
Personality Type	Extroverted/ unstable

LIFE HISTORY SUMMARY

The last son of a large family of three sons and three daughters. The family has always been business oriented in the area of food and catering. The two elder brothers are still in the catering business and have also not been at school for long. He started his business from scratch and is at the head of a small but successful enterprise. His relations with the rest of family is ambiguous because of his lifestyle which is in contrast with the traditional approach adopted by the family. His own experience of school has not been interesting. Was only interested in languages but never found anything “worthwhile”. He often absented himself from school and was once nearly suspended for unexplained absence. This was the time when problems started cropping up with his father. He knew that he would not follow the academic stream but would set up his own business. His father’s business was too tedious and according to him “a form of slavery”. It would not allow him to lead the kind of life he wanted. His relationship with his father has always been ridden with conflicts because of his rejection of the lifestyle imposed by his “autocratic father”. The relationship with his mother was much easier. He enjoys the independence which money gives him. Enjoys traveling thoroughly and the sense of freedom it gives him. Is extremely conscious of social class and status symbols. Is very much appreciated as a boss and his employees are faithful to him. Describes himself as “a person who takes life as it comes.” Perceives his success in business as a matter of luck rather than hardwork.

Profile: Participant M
The Phoenix

Sex	Female
Age	28
Ethnic group	(Creole)
Geographical location	Sub-Urban Port-Louis (Childhood) Sub-Urban Port-Louis (Current)
Educational background	Dropped out at Form III
Category	Low Educational Achievement High Life Achievement
Personality Type	Extroverted/ Stable

LIFE HISTORY SUMMARY

Comes from a very modest family in one of the suburbs of Port-Louis. Her mother who died when she was 17, was a seamstress. The death of her mother represented both a personal and a professional loss to her because she was also learning the trade from her. Her elder sister was already married and, as a consequence she had to shoulder a number of responsibilities. Her father worked as a carpenter but had to give up because of diabetes and eyesight problems. She then reopened her mother's "atelier" and started working primarily on students' uniforms. Despite the fact that she never followed a professional training, she gradually perfected her skills and today she specializes in bridal, wedding and evening gowns. Her business is successful and her clients are from diverse backgrounds. She is still attached to her roots and has never moved from her birth place though her neighbourhood may put off a number of people. She is very much concerned about quality and no finished product leaves her "atelier" without her being satisfied with all the intricate details. Her ambition is to open her own bridal shop with her very own designs and headgear. She is now a member of Femmes Entrepreneur and claims to have learnt a lot about management. Her relationship with her two sisters and father is very cordial. Her elder sister often comes to help in times of emergency while her younger sister has settled in France. She claims never to have taken a break or a holiday because of the demands of her job.

8.3 Participants' Profile: Category B

These participants were not selected on the basis of their life histories but rather on the insight they can provide on the meso level processes taking place in the time period under study. The first participant, P1, is one of the founding members of an active socio-cultural organization and editor of a monthly newspaper. His main area of concern is education and culture and he has worked closely with a number of families and grassroots organizations. For the purpose of getting a broad historical background to be able to light on the socio-political set up, a historian was also interviewed. This participant P2 researched in depth in the background and life of a particular community.

In addition to this, an interview from an active female, P3 member of a political organization provided valuable insight into the role of women and the families as organic entities. The last participant, P4, is religious figure who has worked closely with families in deprived areas for a number of years and proved to be a valuable resource by providing a unique vantage point on family processes in working class families.

8.4 Data Processing and Analysis

The data from the in-depth interviews were recorded ad verbatim. The first step of data processing involved the transcription of the interviews. The interview transcripts were then coded according to the broad categories defined by the conceptual framework. This constituted the first data packaging exercise which allowed the researcher to understand the general orientation and “storyline” that emanated from the first reading of the data. This process represents an attempt to draw relations between educational and life achievements as perceived through local, collective beliefs. In the second instance, the data was revisited in the light of the findings of the open ended questions of the survey with a view to identifying similarities and differences.

In this section, the findings from the interviews will be presented thematically. Some of the themes would be similar to those discussed in Chapter 7 but treated in greater depth to produce more comprehensive insights.

8.5 Findings and Interpretation

The data obtained from the 17 in-depth individual interviews carried out have revealed that both micro and meso level processes produce the pattern of both educational and life achievement. Most participants have laid emphasis on the fact that their aspirations were primarily shaped within the crucible of the family. Parental influence has loomed large on the expectations and effort of the participants and determined, in various ways, both their educational and life achievement. The relevance of role models have also been emphasized repeatedly often in a context of a neighbourhood which offer desirable conditions for children to achieve. The choice of themes for the presentation and analysis has been based on the pattern observed in the data and the interactions produced by agents at the micro and meso levels. Four broad themes were selected to reflect these and the conceptual framework elaborated in Chapter 6, namely:

- (i) The Family Processes
- (ii) The Role Models
- (iii) The Neighbourhood and Community including socio-cultural organisations
- (iv) The Personal Characteristics

8.6 The Coding of Participant's Background

For ease of reference and analysis, the vignettes from participants will identified by a tag containing the following information:

Alphabetical letter: A-M

Educational Achievement: HEA- High Educational Achievement
LEA- Low Educational Achievement
MEA- Moderate Educational Achievement

Life Achievement: HLA- High Life Achievement
MLA- Moderate Life Achievement
LLA- Low Life Achievement

Family Background:

R- Rural
S- Suburban
U- Urban
UM- Upper Middle class
LM- Lower Middle Class
WK- Working Class

8.7 The Micro system-The Family and Parenting Practices

As revealed by the literature, family processes and backgrounds often offset all other variables in determining educational achievement. The literature points out that good parenting refers to the provision of a secure and stable environment, intellectual stimulation, parent-child discussion, good models of constructive social and educational values and high aspirations relating to personal fulfilment and good citizenship; contact with schools to share information; participation in school events; participation in the work of the school; and participation in school governance (Desforges and Abouchaar: 2003)²

Invariably, all participants pointed out that either the father or the mother has had a determining role on their life achievement. In the case of non success, the absence of a parental figure has been perceived as one of the key problems.

² Charles Desforges Alberto Abouchaar, the impact of parental involvement, parental support and family education on pupil achievement and adjustment: a literature review, Department of Education and Skills, report 433

8.7.1 The Father

While the open ended questions in the survey revealed that father's role was construed largely in terms of the provision of financial resources and coaching, the interviews revealed that a much broader function is shouldered by the father or is expected of the father. In the first instance, the father sets the norms and patterns of interaction in the family. As the head, he defines either implicitly or explicitly the expectations of each member of the family. As pointed out:

“li ti attend ki nou aussi nou bizin faire zeffort... par exemple l'heure mangé mem quand mo frère ti sorti ek camarade mais si l'heure mangé asoir tout dimoune bizin la.”

Participant I (HEA, LLA, R,MC)

The father's role is thus crucial because it gives a sense of discipline and sets the parameters for behaviour:

“mo papa ti ena un manière calme mais ferme pou deal ek nou. Nou ti per li c'est vrai mais nou ti trouve li travail dir.”

Participant C (MEA, HLA, R,MC)

By defining the general orientation family life will take, the father sets up the culture of the home. However, the above description also reveals while a child may accept *de facto* the father's authority, the latter is reinforced when the father assumes full responsibility for his family. The maintenance of good discipline is a necessary but not sufficient condition of good parenting. Fathers “need to walk their talk”.

It does also appear that a strong discipline at home, which is construed on authoritative rather than authoritarian lines, facilitates achievement at school. The establishment of a routine that revolves around learning and fixed patterns of study, seems to be a crucial element in enabling high educational achievement. This denominator is shared by F and I but not by B. The family background of the latter is completely atypical.

In addition to this, the father also acts in a more direct way on the educational and life achievement of his child. The profession of the father will determine to what “collateral” resources the child will get access to. In one case the father owned a shop where he sold, among other things, second hand books and magazines. The participant explained that:

“quand mo ti zenfant, mo rappelle mo papa ti content aster banne vieux livres vende lors la rue tout sa la ti entasse cotte moi.”

Participant F (HEA, MLA, U, MC)

Access to books in the family is often construed as one of the sources of cultural capital and the above comment illustrates the fact that the profession of the father determines the father's own hobbies and interests which in turn affect the resources which will be at the disposal of the child. The father's own struggle to learn and improve himself has been construed by the participant as one of the most valuable “*leçon de vie*” as defined here:

“Banne livres la ine aide moi vu qui zotte ine touletant influence moi pour lire. Banne livres la ine aide moi définir mo personnalité”

Participant F (HEA, MLA, U, MC)

As described in the literature, the availability of books is an instance of cultural capital because they provide intellectual stimulation which is supportive of educational achievement (Wong: 1998). The availability of educational resources at home also serves to set educational aspirations and highlight the view that education is not only a means of life achievement and investment but also it emphasizes the consumption view of education as the uplift of the person. (Mariaye: 2005) Such a perspective has also been echoed in the survey with regard to teachers' discourse on education.

Furthermore, fathers who are in a particular trade often open up a professional opportunity for their children and define the career aspirations of their children. One female participant narrated the influence of her father on her younger brother in insisting that his only son takes up on the sugar estate exactly the same post that the father occupied:

“Mo papa ti mette beaucoup pression pou ki mo frère prend so place lor tablisement”

Participant B (HEA, MLA, R, WC)

However, these expectations are not always accepted in toto. Sometimes parents' way of life also has a “boomerang” effect on children as described by one participant whose parents were in the food catering business, commented:

“tous les jours faire nou tou levé dépi bonne heure. Donne coup de main. Mo ine guette zotte faire sa travail la. Mo pas ti oule sa kalite la vie la... Mo papa ti oule so bane garçon reprend business la pou pas perdi sa place la dans bazaar.”

Participant J (LEA,MLA to HLA, U,MC)

It is evident that the nature of the relationship between the father and children also determines to a large extent the influence of the father. A father who is excessively autocratic and imposes a rigour and a lifestyle which is disconnected with the reality that the child faces in his interactions with the world outside may produce the contradictory effect as illustrated below:

“mais jamais li ti comprend ki mo tipe attend autre chose. Li ti toujours content so fami so milieu so traditions.”

Participant L (LEA,MLA to HLA, S ,MC)

What is interesting to note, however, is that despite child's rejection of the alternative offered by the parent, he/she however, whether consciously or not, will integrate some of the values. Values which are bound to re-surface in his self articulated philosophy or chosen professional pathway. Participant J clearly resented the way of life that he father imposed on him, yet, he is now, as his father was, totally dedicated to his business.

The father's own characteristics and discipline will also impinge upon the child's personality as illustrated by the following comment:

“Li ti ene dimoune extra tranquille ek en ordre. Ziska zordi to demande li un zaffaire cotte ete li conne exactement cotte sa.”

Participant L (HEA, MLA, R, MC)

Some participants revealed that they admired certain particular traits of their father which inspired and still inspire them. At the root of father's modelling influence is the how the father defines relationship with the family. The power of observational learning opportunities during parent-child

interactions has been fairly documented in the literature on parental involvement. (Desforges and Abouchaar: 2003). The data clearly supports the view that father's role in helping children to define their life aspirations and set of values which will underpin their actions and decisions. The father, by setting the overarching principles that govern family life, ascribes a set of expectations on all members as illustrated below:

"...Mo pas rappelle mo papa ine deja faire moi ek mo frère aucun reproche...jamais line crie ar nou...to comprend par nou même nou ti conné ena quichose pas bizin faire..."

Participant I (HEA, LLA, R, MC)

Few respondents have taken decisions which reject those expectations. Even for those who have done so, the values given during childhood have been so deeply entrenched, that they still affect their lives in diverse ways.

The absence of the father is also always invariably remedied by identifying in the child's environment a father figure that would fulfill some of the same roles. As the following experience of a participant narrates:

"j'avais la chance d'avoir une famille italienne qui m'a aimé comme un fils. Le papa croyait toujours en moi, il me disait de ne pas m'en faire. Il payait mon billet pour que je puisse venir passer des vacances chez eux."

(Participant G, MEA, HLA, R, WK)

The expectations set by the father figure is crucial in determining the efforts the child will put in. Another participant, who has been less successful academically describes his experience as follows:

"J'ai perdu mon papa quand j'avais douze ans et c'est maintenant que je réalise que j'ai perdu quelque chose parceque après sa mort il n'y pas eu quand même ce support et cet encouragement. J'ai quatre frères aînés mais quand même sa handicappe..."

(Participant H, MEA, LLA, U, MC)

Many participants understand the relevance of their father's role only at a later stage of their life when they look back on their childhood with hindsight and maturity. Though father's role is often limited to the more practical considerations related to the school life of the child, that is, to the provision of financial capital, the findings clearly gesture towards the relevance of father's role in providing both human and cultural capital.

For participants I, J the role of the father seems to have been discounted on account of an excessively rigid mindset and authoritarian style. In both cases, as highlighted below excessive authority worked against positive parent-child relationship, which is a prerequisite for the effective development of a positive home environment.

"Li ti toujours occupe so travail ti demande beaucoup le temps...nou tous to beaucoup pli proche ek mo maman...no ti per li...li ti traditionnel, des fois même un peu distant...ziska zordi li difficile pou cause..."

Participant L (LEA,MLA to HLA, R,MC)

There does appear to be a varied typology of “good” father. While there is no set profile good fathers did have some common traits such as attachment to the family and commitment to work. These two characteristics seem to offset less positive ones, which children are often are conscious, of but discount as being less important.

8.7.2 The Mother

One of the main findings of this research relates to the strong impact of mothers on the educational and life achievement of their children irrespective of her own educational attainment.

Participants with high life achievement invariably point to the centrality of the mother’s influence in their lives. The contribution of mothers has been defined on different fronts. Mothers have been examples of resilience often in the face of adverse circumstances. Children watch their parents closely and learn valuable moral lessons from the mother’s actions. The effect is even more pronounced in single parents’ home because of the proximity between the mother and the child due to the absence of the male parent. This close proximity manifests itself in the time spent in the company of the mother, often till her workplace.

*“Quand mo ti zenfants mo ti alle avec mo mama ek so banne camarades
quand zot alle travail dans carreau... mo ti habitué travail.”*

Participant G (MEA,HLA,R,WK)

When children can see “*de visu*” the relationship between the efforts made and the fruits of that effort, they are more likely to internalize the same perceptions and values. Being in close proximity with the mother also meant developing the same routines and discipline that she follows. One participant highlighted the following:

*“Je me souviens ma maman se levait à cinq heures pour aller travailler à
l’usine. Je me réveillais aussi pour la regarder et j’allais même parfois
jusqu’au bus stop pour la regarder s’en aller. C’est une habitude qui s’est
installé chez moi. J’aime me lever tôt et être à l’heure.”*

Participant E (MEA,HLE, SU, WC)

The habits created within the family set up predispose the child to adopt a particular lifestyle which may be required for success at school and in life, as posited in the concept of “*habitus*”. The theoretical framework used in the context of this research highlights that the sense of rigour, conscience of craft as well as delay of gratification are all taught through observational learning and have direct bearing on the chances of educational success. The data strongly supports this point because a culture of hard work and effort as well as the teaching of delay of gratification through role modeling seems to have cut across life stories of participants who have either had high educational or high life achievement. The creation of home atmosphere is often the prerogative of the mother as illustrated by the following comment:

*“mo mama to toujours la pou nou. Depi tipti line donne nou sa l’habitude
fini l’école baigne mange ek assize faire devoir lerla alle jouer.”*

Participant F (HEA, MLA, U, MC)

The degree of literacy, though a constraining factor, may have been overcome by another form of involvement which, for the purpose of the study has been called “indirect” involvement: the parent does not directly intervene in providing pedagogical support but demonstrates in diverse ways such

as asking questions about school, being around when the child is on task and seeing to it that other more concrete forms of support are available as depicted below:

“même si li pas to faire grand classe li guette nou ziska niveau li ti capave. Mo maman vu li pas ine arrive un high academic level li envi ki so zenfant arrive pli loin ki li . même si li pas ti ca pave aide moi faire mo devoir. Li ti tout le temps guette si mo tipe capave faire li.”

Participant F (HEA, MLA, U, MC)

The theoretical framework drew our attention to the relationship between parental expectations and school achievement (Velez and Jones: 1997) and significantly so, to grades in Mathematics, English and Science. This seems to be supported by the life stories and anecdotal reports from participants F, G, H, J and K. They all reported that rules were enforced at home whether explicitly and implicitly.

Another participant described how his mother negotiated his tuition fees with the class teacher:

“Je me souviens que ma mère avait du marchander avec le professeur de leçon pour que j’ai une place dans les leçons particulières. Je me souviens que cela faisait 30 roupies par quinzaine, cela faisait 60 alors on payait 50 roupies.”

Participant E (MEA, HLE, SU, WC)

One interesting aspect revealed by the data and which is may appear contradictory to the general expectations about parental involvement in schools (Mc Neal:1999 cited in Redd et al) is the low direct involvement of parents in the school life for those who had both moderate and high educational achievement. It can even be safely asserted that Mauritian schools rarely open up to parents except on some symbolic occasions like the Open day, which is more often than not viewed with indifference by parents. Though participants E, F, G, H, I revealed that both parents did set a particular culture at home, they do not report any direct involvement in school activities as such. The data strongly supports the view that home practices in childhood have a long lasting impact on children’s educational trajectory. Participants I, F, G and K appear to have benefited from parental guidance in childhood but individuated early and became autonomous. It remains to be confirmed whether the neighbourhood, or community or even peers take up that role as the child grows up.

Participants’ discourse reveals that mothers often take the lead in the child’s education across all family types; even though for many of them the school remains a “black box” on account of their own limited experience of it. Nevertheless, they often cross the bridge quite boldly. For many of those participants who come from working class families and who have high educational and life achievement, mother’s illiteracy has not been a constraining factor. Instead the disempowerment which mothers felt because of their literacy made them become more convinced and determined to secure a better future for their child.

The present study sought to uncover the processes within the family which can explain educational and life achievement through the two parental figures. One of the most important findings is the fact that mothers provide a form of “capital” which has so far been undocumented and not explicitly recognized: emotional capital. This manifests itself in diverse ways as the participants explicated. Firstly, the ways in which parents deal with life is portent of their ability to deal with frustrations in an emotionally productive manner. As one participant narrated:

“ma mère est passée par des moments difficiles elle ne s’est jamais pris à ses enfants...elle priait beaucoup...je crois que cela l’a aidé... mais elle croyait toujours qu’elle pouvait tout surmonter.”

Participant E (MEA,HLE, SU, WC)

The emotional back up that mothers provide to their children is often religiously grounded. Piousness and faith often made of these illiterate mothers a pillar of strength and support for their children. The data clearly reveals that at the heart of all family processes is the mother because of the key role that she plays in building in her child the emotional resources which are so vital for success. By demonstrating resilience, courage and self confidence, mothers have taught their children how to survive and that nothing pays as the time tested method of work and perseverance.

“...Mo maman ti toujours un vrai soutien...li montre nou couma bizin per - severer...li ti travail bien dur...!”

Participant A (LEA, MLA,SU,WK)

By demonstrating problem solving skills to deal with difficult life circumstances, the parents become role models which the children can emulate. What may make the mother’s role all pervading is the emotional attachment that already characterizes the mother child relationship. A child’s attachment to the mother and his or her observation of her problems created an inspirational force to succeed. While mothers built and reinforced the emotional maturity of their wards by struggling and caring for their families they demonstrate the core values which were integrated in the individual’s principles and values as exemplified by the following participant:

“Malgré le fait qu’on payait moins (pour les leçons) il ne s’est jamais passé un mois où on n’a pas payé... je n’ai jamais raté un mois quoiqu’il arrive. J’ai toujours bien planifié les choses pour avoir les ressources nécessaires quand j’aurais besoin.”

Participant E (MEA,HLE, SU, WC)

It is evident that together with the values, mother’s model out the relevant planning skills that children will need later in their own life. Saving money to help improve educational chances seems to have been a major family practice for participants F, G, I and K. Charting successful career pathways is contingent upon building up the emotional resources and the skills which would enable the individual to formulate realistic expectations and set out the targets to achieve them. Like mothers, fathers too demonstrate these indirectly by modeling productive coping strategies as shown below:

“pli grand coup qui mo papa c’est quand mo mama ine mort. Li ti affecté mais après li essaie remet li dibout.”

Participant M (LEA. MLA, SU, WK)

The set of data also revealed dissonant voices too. The case of participant B (HEA, MLA, R, WK) needs to be highlighted. It does appear that some individuals succeed despite their negative family background as illustrated below:

“pou mo maman l’éducation... li pas ti important... zamaïs li ine comprend qui faire mo ti envi apprend... mo pense vine depi so fami... so l’entourage.”

The chronosystem of each participant determined to a large extent the life experiences and the specificities of each participant’s world view and priorities. Though one set of experiences cannot be

compared to another, the conclusion that single parenthood does not seem to have been a major hindrance in educational or life achievement flows from the data. This position is similar to the one articulated in a number of African and Asian studies (Buchmann and Hannum: 2001) where single parenthood seems to have spurred an enhanced drive to succeed because mothers have been supported by the wider kinship or even the communities. This is the case for participants A, G, I and M. However, for Participant H, the loss of the father has had a lasting impact despite the fact that his family type remained extended. The case of participants B and F must be noted. Both have not experienced educationally stimulating environment. Indeed, the elements present in their respective family background predicted low educational achievement. Expectations and aspirations regarding education were low even in their communities and kinship. One must look towards the meso-system to identify the factors that determined their educational and life success.

8.8 The Micro and Meso System: The Role Models

The findings from the individual interviews show that one of the most common characteristics shared by those individuals who have succeeded in life is that of a role model. Few of the participants (K, L, D) were self driven enough to have made it without having a reference. For most participants, one of their parents has been a role model at some point in time. But while parents were moral role models and often provided the general life orientation at a personal level, the widened scope from the world of work afforded them an added opportunity to interact with people whose characteristics they found worthy of being emulated. The nature of parent-child relationship, parental influence and involvement on the education has been presented at length in the previous two sections and as such will not be taken up again here. Rather, the major characteristics of the role model as well as the psychological processes through which models have effectively influenced educational and life achievement will be explored.

The findings highlight the fact that models are selected on the basis of their perceived success in areas which are valued by the person. Models were chosen because they correspond to an ideal of success which was already embedded in the participant's value system. Those with high life achievement, irrespective of their educational achievement, participants C, D, E, F and G showed great clarity in identifying a role model which will not only serve as a guide but, who also actively contributed to shape their professional trajectory. One participant highlighted that:

*“... quand je regarde GD, il était très modeste et regarde ce qu’il est devenu.
Je me dis c’est possible.”*

Participant E (MEA,HLE, SU, WK)

One additional characteristic which cuts across the different case studies is the similarities in the life stories of the participant and the model chosen. Indeed, role models were selected not only because they were “ideals of success” but also because they represented what is possible. The motivating potential of the role model is attributable also to the fact that they are symbols of the “realisability” of the goal. They were the living example of what could be achieved if the necessary effort is put in the process. This idea is further supported by the discourse held and the work habits exhibited.

*“C’est quelqu’un d’unique... il n’aime pas qu’on lui dise il y a un problème,
il fallait trouver la solution... j’admirais sa façon de faire et quand je me
regarde aujourd’hui, je vois que sa façon de faire est devenue automatique
en moi.”*

Participant G (MEA,HLE, SU, WK)

Role models are therefore both charismatic success cases but were directly inspirational because of the perceived resemblance between their life circumstances and that of the participant's. Such close identification contributed to the development of an emotional bond which further strengthens the modeling process. Apart from "mentoring", that is, teaching certain specific work skills, it is also evident that without this emotional link, the sustainability of the modeling influence would not have extended over a number of years, sometimes even beyond, the normal work relationship.

"Je continue de lui demander conseil même si nous ne travaillons plus ensemble...quand il est tombé malade, j'ai pris l'avion pour aller le voir ..."

Participant C (MEA,HLE, R, MC)

Furthermore, the findings reveal that participants may have a number of role models from diverse spheres of life. One shared characteristic of high life achievers is that they are keen observers in the broadest sense of the term. While many of them identified positive role models which they sought to emulate, some highlighted the influence of negative role models as described below:

"Dans mo fami, mo ti ena un quantité ma tantes ek cousines, pou zotte arrivé c'était marie bien. ... Mo pas ti le sa qualité la vie pou moi... C'est pour sa qui mo ine mettre le paquet dans les études. Pou zotte la vie c'était l'amusement."

Participant B (HEA,MLA, R, WK)

What emerges as a clear outcome of the study is the significance of role modeling on the individual trajectory of participants. The reference to role models has been conspicuously absent in the discourse of moderate life achievers, A, H, I neither mentioned a key parental figure nor a friend or colleague. Indeed, for most moderate achievers, there has been a marked inability to relate and communicate with others or an absence of peers or colleagues with whom they could relate as evidenced from the comments from two participants:

"les amis malheureusement ils sont partis faire des études et comme je changeais de filière, c'était difficile de garder contact...on s'est perdu de vue."

Participant H (MEA, LLA, R, MC)

This finding has to be related to those of open- ended items of the survey questions dealing with peers. It was discussed in chapter 7 that peers offered significant insight in the world of education and work by acting as an information network on the possibilities offered to improve oneself. Although peers is but one factor affecting educational achievement and that life circumstances of individuals are not reducible to a few over sweeping generalization, the availability/ absence of peers with high expectations seems to have been a factor worth investigating.

The life experiences of the participants seem to support the folk psychology that an individual's ability to set targets is contingent upon the availability in the environment of key figures who would not only inspire but also provide concrete opportunities for success as shown by the comment below:

"Il m'a beaucoup aidé, me recommandait chez des clients . Il m'a parrainé"

Participant E (MEA,HLE, SU, WK)

At the root of the modeling effect was the participants' ability to use the personal life stories of the role models as reference to establish their own goals and actions in the important formative years of their lives. It is, therefore not a coincidence, if most participants referred to the role models when describing their early adult years.

One interesting finding relates to the opportunities which role models offered for individuating from families. The family offered the values background which the individual would use to evaluate people and actions but high life achievers have been able to extend their observation effectively to their increased social circles: to peers in the first instance and in the second, to career mentors at the workplace. Moderate/ Low educational achievers have been, to a certain extent, confined to their family circles during school time. This appears to have been the case for participants A, D, and H. As one of them reports:

“Mo maman ti veille nou, pas laisse nou trop ek camarade et nou ti pe rende lacaz direct après l’école.”

Participant A (LEA, HLA to MLA, SU, WK)

While some parents may be extremely cautious regarding the negative influence of peers, one cannot also discount the possibilities that the peer group may offer if high educational expectations are the shared norms.

In support of the discussion of peers as role models carried out in the survey questionnaire, the participants have pointed out that peers served as both positive and “negative” models. While in the survey, the term negative meant “who exerted a bad influence”, the connotation given here to “negative” is different. Participants negated the model of life presented by peers as illustrated below:

“J’avais un ami,... il était assez riche car il était un fonctionnaire. Il aimait toujours bien être entouré et ses amis abusait de sa générosité. Moi je me suis dit jamais je ferais cela. Je lui ai parlé à plusieurs reprises pour essayer de lui ouvrir les yeux.”

Participant E (MEA, HLA, SU, WK)

However, positive role models were also identified among peers or relatives. What is interesting to note is that the function which is assigned to the role models in adolescence is mostly related to study skills and academic achievement. In a socio-historical context, it is easily understood that for many adolescents in the 1980s and till today, successful academic achievement was one of the most determining factors in defining an adolescent’s family and social status. The choice of a suitable role model was, therefore, often influenced by the relative or acquaintance who was generally regarded as a model of success within the family or the community. These “public” models were watched closely and, in a number of situations, provided the academic mentoring, not so much in terms of cognitive modeling, but more in terms of the study skills and habits as revealed by the comment below:

“Mo cousin tipé reste dans meme la cour alors li ti très competitive. Mo tipe rentre dans sa chemin schooling ... Mo ine suivre so facon travail. Des fois to trouve dimoune travail un coup bien mais li li ti ena un rigneur. Pou mo frere aussi, ti pareil parcequ’il tout les deux ti alle royal.”

Participant F (HEA, MLA, U, MC)

Another notable feature is the claim by some of the participants that they themselves acted as role models (either on educational or on life achievement front) for either their younger siblings or other relatives as demonstrated below:

“Mo ena nièces qui mo conné look up.. zot envier dans un certain sens mo life style..mais mo dire zot chaque fois qui pas gagne tout lors plateau.”

Participant D (LEA to MEA, HLA,R,MC)

For both high and moderate achievers there seems to be an implicit understanding that having a role model is essential in the formative years of adulthood.

8.9 The Micro/Meso system: The Neighbourhood and Community

The influence of the neighbourhood and the community has also been investigated in the course of this study. While the survey questionnaire provided information on whether the neighbourhood and community impacted on the education and life achievement of individuals, the interview unveiled the processes through which this influence was articulated. The literature review highlighted the fact that both the neighbourhood and community could significantly influence the individual achievement patterns by impacting on human and social capital (Redd et al, 2002). The distinction between the neighborhood and the community in the Mauritian context is explained as follows: the neighborhood is construed as the immediate social environment of the person and refers to the people with whom the individual interacts on an almost daily basis. The community is understood as the social group to which the person belongs in terms of his cultural/ religious or ethnic affiliation. While in many cases they both may coincide, it is not always necessarily the case. Families may not identify themselves with the families in their immediate environment, but rather with families in another locality.

For the purpose of this study we have followed a theoretical framework that considers neighbourhood/ communities and families as interacting spheres of educational and life achievement. The data highlights the effect of neighbourhood on parental expectations about education and ability to adopt effective parental practices. The following comment illustrates the pervasive impact of neighbourhood:

“...Quand on est venu habiter Quatre Bornes il y avait beaucoup d’enfants qui allaient à l’école et donc ma maman a eu cette motivation elle même pour me faire étudier et pour aller a l’école au moins jusqu’a la SC...”

Participant G (MEA to HEA, HLA, R, WK)

The social environment possibly aids these patterns of both child and parent involvement and educational engagement. It is clear that high educational achievers were brought up in neighbourhoods which displayed collective efficacy. The above vignette clearly illustrates the case where parental expectations were adjusted as an outcome of neighbourhood influence. More importantly, the neighbourhood itself provided concrete support and opportunities for academic learning as illustrated below:

“il y avait un professeur dans le voisinage qui me donnait des leçons de chimie. Il savait que ma maman travaillait aux champs et donc il me donnait des leçons gratuits, il me donnait des livres.”

Participant I (HEA, LLA to MLA, R, WK)

The participant clearly defines the neighbourhood characteristics such as positive adult role models and peers with high educational aspirations as triggering his interest in education. Despite that it was clear that the mother came from a working class rural background, she did not experience isolation in the neighbourhood. The data obtained from studies in African and Asian contexts also, for example, highlighted that in Malaysia, the community provided support to widows (Buchmann and Hannum, 2001)

The community effect was also substantiated as in a number of cases, a few participants (M, I, A, G, F) pointed out that adult conversation at social gatherings and participation in socio-cultural activities often centred around education and information about “good tuition teachers and schools”. This information was not only acted upon by parents but transmitted to children and the attendant expectations conveyed indirectly as exemplified:

“Quand to zenfant to tend to papa mama cause. Zotte in alle dans tel function tel la priere zotte cause... Un tel so zenfant ine arrive, ine passé....sa ti incite zotte pou reflechi...”

Participant F (HEA, MLA, U, MC)

Neighbourhood and community collective practices, in a few cases, seem impact upon home practices in terms of the subject of conversation at home. When parents have membership in a community, the value system of that particular social group does determine the value system of the family.

In the same way, educational expectations and aspirations are born in the crucible of community and neighbourhood set up. The evidence supports the view that both the collaborative and competitive dimension served to shape family behaviour and priorities as illustrated by the sharing of information regarding “good” tuition teachers.

“mo rappelle quand mo ti gagne QEC ena parents to vine joindre mo par - ents pou conne avec qui professeur mo tipe prend lecons...”

Participant I (HEA,LLA, R, MC)

Parents became willing to sacrifice other domains of achievement for the sake of academic achievement because of the status attributed collectively to education of children. In closely knitted communities, families, it seems, were more receptive to the influence of the collectivity. In the Mauritian context, though the finding cannot be triangulated with the findings from the questionnaire, the case studies seem to suggest that participation in neighbourhood or community activities enhanced parental awareness about the social worth of education. This understanding is further reinforced when the case of those participants who have succeeded despite being in “at risk” neighbourhoods, are considered.

However, at risk neighbourhoods and communities also have potentially the adverse effects. The contrast between participant B and participant I and F is worth noting. Participant B describes her neighbourhood as follows:

“dans sa l’endroit Presque zotte tout ti travail dan tablissement. L’amusement ti premier. Beaucoup banne zommes ti boire. Zotte ti alcoolique...Seul l’ambition qui zotte ti ena seki zotte zenfants aussi gagne travail lor tablissement . zotte encore rest ek zotte mentalite coloniale... nou tous ine bizin laguerre pou alle l’ecole”

Participant B (HEA,MLA, R, WK)

The specificity of this particular case reveals that the neighbourhood is an area of concentrated disadvantages which has weakened parental effort towards the academic success of their children. The socio-structural characteristics and the lack of collective efficacy of such neighbourhoods create conditions where it seems that children have to work against their own parents to pursue their studies. For participant E the neighbourhood, though, not working directly against education, did not support explicitly educational agendas.

*“Chacun avait de l’ambition pou arriver..construire leur maison en béton...
mais arrive pas par necessairement par l’education...”*

Participant E (MEA, HLA, SU, WK)

However, in the case of participant C, I and G, it seems that the neighbourhood acted as a form of extended family providing enhanced capacity for cultural capital (Buchmann and Hannum, 2001). Indeed, taken in a historical perspective when families were disadvantaged the neighbourhood provided the necessary adjunct to ensure that children could have access to a common pool of resources. The collective efficacy of neighbourhoods is at its peak when it functions on a communal basis, pulling together human and social capital to support families with a “deficit”. The data support the view that the neighbourhoods and communities could have had a mediating effect on families by influencing their value systems and defining the meaning of success.

More importantly, by providing information networks about the means supporting their child’s learning and by giving parents the opportunity to associate themselves with parents with high educational expectations of their children, the community compounds the contextual effect. What is of interest to us are the findings which relate to effective parental practices as being a derivative of the social context which is supportive of educational pursuits.

An interesting differential finding relates to the interaction between ethnicity and neighbourhood/communities. Participants B, E are from predominantly Creole communities. Though the purpose here is not to generalise, the data seems to gesture towards the differential ways in which communities function and define value systems and sets of aspirations regarding schooling and education. It does appear, from the discourse of the two participants that they succeeded educationally and in the life *despite their families and neighbourhoods*. This set of finding must be interpreted together with those generated from Phase I and the survey. In the first instance, schools from sub-urban and coastal regions which are predominantly, though not always, made up of inhabitants of Creole origin, have displayed lower than national averages achievement patterns particularly in Maths and English. Similarly during the survey, people from the Creole community were slightly less likely to complete their post secondary education.

8.10 Personal Characteristics

The present study sought to uncover the processes at the micro and the meso level which explained the interaction between educational and life achievement. However, it has become clear in the course of the data analysis that the family, peers and the neighbourhood/communities, though, explaining to a large extent an individual’s trajectory did not offer a complete picture. In most of the case studies, it became obvious that the personal characteristics of the person contributed significantly in determining the final outcomes. Among the high life achievers, there are some undeniable and shared common traits which explain the participants’ resilience and continued engagement with their studies or work. The iterative process of analysis enabled us to uncover the following:

8.10.1 Sense of purpose or Future

One key characteristic of all high achievers relates to the early setting of targets. Indistinctly, participants who have excelled in both domains admitted to having been conscious at an early age that they need to make a deliberate choice regarding the kind of life which they would lead. Once

the choice is made, their actions are all directed towards achieving the set targets. The current literature on goal orientation theory highlight that high achievers combine their achievement goals with the learning goals taking into account the different milestone they will be required to cross.³ Unlike others, they are able to set **realistic** goals taking into account their abilities and strengths as well as their weaknesses:

“J’ai commencé à coiffer des l’âge de dix sept ans et je savais que je le savais très bien. Donc je m’étais fixé un but...”

Participant E (MEA, HLA, SU, WK)

The data seems to support the view which is contrary to the standpoint adapted in certain research findings (Thorkildsen & Nicholls, 1998)⁴ whereby ability-focused goals are essentially associated greater competition. However, the case of participants E, F, G and I reveal that ability-focused goals are compatible with task- involved goals (which are more concerned with the satisfaction derived from completion or mastery). High achievers effectively assessed their ability and set their goals with respect to their perception and understanding of what they could do better than others as illustrated below:

“mo ine préfère lance moi dans quichose mo conne I’m good at qui mo alle lance dans quichose mo pas sir mais a l’âge de quinze ans mo ti conne qui métier mo envi faire.”

Participant F (HEA, MLA, U, MC)

One emergent trait is the ability of high achievers to translate a long term goal into short and medium targets. This is a distinguishing feature because it demonstrates not only a very strong sense of self and purpose but also, a very accurate reading of reality. In the case of high life achievers from working class background, the interviews revealed that their targets were incrementally constructed, and that despite momentary setbacks, they were never gave up. As demonstrated in the field of psychological research (Pintrich, 2000)⁵, goal setting is related to stability as well as contextual sensitivity. One participant revealed that:

“Bien sur dimoune quand zotte trouver ou reussi zotte faire banne coup bien bas. Quand mo ti ena pou gagne un bon l’emplacement pou mo demarre mo business un dimoune ine pass avant moi. Mo banne produits ti fini pare pou li pas ti encore mem faire. Lerla mo senti moi un peu decourager mo ine realiser qui dans la vie zeffort parfois pas suffisant ou bizin conne lotte quichose aussi... Mo pas ine abandonne mo tipe rend loan et pas ti ena l’autre facon pou rembourser.”

Participant A (LEA, HLA, R, WK)

Participants’ discourse is witness to the fact that swimming against the current has often been

³ De la Fuente Arias, J . Recent studies in the study of motivation in Goal Orientation theory, *Escritos de Psicologia Writings in Psychology*6, 72-84(2002).

⁴ Thorildsen, T. A & Nicholls J.G (1998) Fifth Graders achievement motivation orientations and beliefs. *Journal Of Educational Psychology*,90 (2), 598-610

⁵ Pintrich, P. R. (2000) The Role of Goal Orientation in Self Regulated Learning, the *Handbook of Self regulated Learning* (451-502), San Diego: Academic Press.

perceived as a necessary condition for success. Those who have made it from scratch revealed that they expected an uphill struggle and reality proved it to be so. However, while their expectations were frustrated a number of times, they also quickly identified alternative solutions or people who could help them through a difficult phase.

The sense of purpose or future is one of the key features that distinguishes high achievers from average achievers. The latter tend to change focus while facing setbacks as highlighted by the life experience of participant H:

“J’ai changé de filière plusieurs fois... j’ai commencé par des études en international studies mais je n’ai pas complété et puis...”

Participant H (MEA,LLA, U,MC)

High achievers will, on the contrary, redirect efforts towards an alternative medium range goal which would still enable him/her to reach the original target as highlighted below:

“Mo ti commence amene linge depuis malaysie ek la chine. Pas ti encore ena magasin alors mo ti commence rende cotte moi... enfin de bouche a oreille. Mais demande la ti la mais mo pas ti ena un outlet... alors mo ine trouve un compromis avec un fami qui ti ena magasin dans la ville...”

Participant D (LEA to MEA, HLA, R ,MC)

Furthermore, most high achievers individuated early from their family and environment. Their goals were almost invariably not tied down to the philosophy or vision of the family or neighbourhood as for participants B, E, F, G and even J to some extent. While in some cases it is clear that their expectations were influenced by their wider social milieu, there were dissonant voices insofar as some participants revealed their innate characteristics as their driving force as illustrated by the following extract:

Michel: *Oui mes amis pensaient différemment. Ils voulaient des choses différentes. Mais pas nécessairement mauvais mais ils avaient d’autres priorités. Moi j’étais un perfectionniste, jamais satisfait.*

Interviewer: Tu étais comme ça depuis quand?

Michel: *Depuis aussi longtemps que je m’en souviens (rires)... tu sais à l’école qu’est ce que je ne faisais pas pour me faire remarquer! Mais très vite je me suis rendu compte que je ne pourrais pas poursuivre mes études faute de finances...il y avait des enfants moins brillants qui avaient continué. Mais quoique je faisais toujours cela devait être parfait! Je ne peux pas t’expliquer ...je suis comme ça!”*

Participant E (MEA,HLA,SU,WK)

This comment is not only revealing of ability/ performance oriented concerns, but also, of adaptive distancing from a social and cultural environment which may be construed as constraining. This is one of the processes through which, participants sought interaction with other significant others who could provide an alternative vision which is more satisfying and challenging (Deci and Ryan,2001). The absence of adaptive distancing became, however, clearly evident in the life stories of those who succeeded less well. It was more difficult in the cases of those participants who came from culturally and educationally advantaged homes to determine how far their drive for success was the product of their own personality and not attributable to their background. One of the main conclusions will be in terms of the ability for high achievers to self-regulate; a position which seems

in line with much of the literature on self regulation and achievement motivation (De la Fuente: 2002). The findings highlight that high life/ educational achievers not only deliberately choose their goals but also maintain persistence in tasks and on goals when faced with distracting alternatives. When the findings from the survey is correlated with those of interview as in the case of participant M, the negative impact can be directly established as shown below:

“My best friend stopped at Form II and I followed her when I was in form III. Most of my peers stopped school at an early age and I followed”

Participant M (LEA, MLA to HLA, SU, WK)

8.10.2 Positive self concept and self esteem

At the root of the psycho-social characteristics of high achievers are the twin notions of self concept and self esteem. Participants not only displayed self esteem after being successful but claimed to have always believed and valued who they are. Their self concept seemed to be strongly connected to a positive understanding of their efficacy and their abilities (Tuckman:1999 ⁶). However, the informal interviews also revealed that both emerged from deeply embedded values which have been acquired from observation of their environment as illustrated below:

“...Tout le temps mo parents ine élève nou dans un discipline... mo aussi mo pense quelque part li influence mo personalite. Réussi academiquement ti vine presque un zaffaire normale mo ti travail pou sa. Mo ti conne mo pou reussi quelque part.”

Participant K (HEA,HLA, U, UMC)

When positive values are internalized and integrated in the individual's personality, perceptions of self efficacy would improve as well as self confidence. It does seem that both the home and the wider social environment at the level of the micro system did provide opportunities for children to develop self efficacy as exemplified by this comment:

“quand mo ti gagne congé mo ti habituer faire miss dans l'école mo ti top net...(rires) et puis quand mo ti alle primaire, professeur ti mette moi derriere ek banne zenfants qui pa conne, ek moi quand mo pas ti conne mo tipe montrer zotte, zotte ti trouve sa woaoow!”

Participant F(HEA,MLA,SU,MC)

When individuals have an ability to prove what they are worth either at home or at school or within their peers, the expectation of success is also internalized and impacts positively on self esteem. It is important to note that self efficacy is not only linked to academic success. As illustrated in the example:

“Quand ma maman allait travailler au champ je l'aidais. Je connaissais toutes ses amies. Elles m'appreciaient...je les aidais à finir leur travail pour qu'elles puissent rentrer ensemble.”

Participant G (MEA, HLA, SU,WK)

⁶ Tuckman B. A Tripartite Model of Motivation for Achievement: Attitude/Drive/Strategy, Paper presented at the Annual meeting of the American Psychological Association, Boston.

Parental trust demonstrated to children when they are assigned tasks or chores is an evidence of the high expectations placed on children and children are communicated the belief that they have the ability to meet those expectations. The life experiences of participants A, C, F, E, G and K strongly support this view. In their perception and as demonstrated by the following comment their early involvement in household and other chores gave them a sense of responsibility.

“Cotte moi tout dimoune ti donne coup de main alle la foire...depi 10 ans mo leve ek mo parents.. mo ti content alle, mo senti moi grand.”

Participant C (MEA,HLA,R, MC)

It seems the sense of self efficacy of high achievers derived from those childhood experiences which brought them to the realisation that they are valuable contributors in the household and, ultimately to the school. It is noteworthy that children's sense of self efficacy is not tied to only their academic achievement but can also expand to include their non academic achievement. The findings supports the view that positive self esteem was built at quite early age in high achievers and is closely linked to task achievement orientation ((Tuckman:1999). The data reveals two important dimensions of self esteem and self concept. It is related to one's own perception of self, and it is defined in a particular social setting which is itself guided by the standards and overarching values of the micro and meso system.

8.10.3 Ability for Empathy and Social Competence

One common thread among the high life achievers is the ability to demonstrate social and emotional intelligence. On the one hand, social competence articulates itself in diverse ways especially when it comes to functioning in the work place and displaying good communication skills while ability for empathy relates basically to the parental figure especially in single headed homes. Participants described memories of actual instances where they felt empathy for a close relative:

“Quand j'ai vu ma maman se lever à 5 heures pour aller travailler en hiver sans aucune protection sauf un grand morceau de plastique qui lui servait de pardessus,ça m'a fait mal...”

Participant G (MEA,HLA, SU,WK)

It does appear that ability to understand a situation from the perspective of others is helped if the parent-child attachment is secure. This ability is often translated into other social situations and explains to a large extent the social success of individuals. For many participants social competence was demonstrated in their excellent communication skills as indicated in their profiles. Many of them have maintained strong attachment to people outside the immediate family circles as highlighted in the following:

“Mo banne camarades aides quand mo bien bizin zot...oui...des fois meme pou travail...zot plis qui fami.”

Participant J (LEA, MLA to HLA)

The current literature review pointed out that the importance of social and relationship goals also serve to enhance responsibility and predict achievement (Wentzel and: 1998). Anecdotes indicating social competence or empathy beyond the family realm was conspicuously absent in the discourse of average achievers.

8.11 Conclusion

The insight generated by the interviews highlighted the interactive dimensions of various forms of capital. They also identified a number of processes at both the micro and the meso levels which underpin educational and life achievement. The life stories of participants, often reported in anecdotal form point out to the centrality of mother's and father's role in the family processes. Though it is generally acknowledged that parents are the first educators of their children, the processes through which this "education" takes place is less widely recognized and brought to the limelight. The study clearly revealed two processes at play which is in line with the existing literature. In the first instance, internalization (Hoffman:1994), described in both a psychological and sociological perspective as the individuals' ability to engage in unselfish or other societally approved behaviours, is greatly facilitated if the parent-child interaction is based on strong attachment. Secondly, most of those who succeeded in terms of both academic/ life achievement or both indicated a positive cognitive and affective interaction with at least one parent. In the early years, it is the parents who define the "glasses" through which the child will see the world and define his/her place in it. Parents are important sources of information about the world. (Cullingford: 1997). More importantly, the parents do so by:

(i) Setting up the discipline and code of behaviour at home: This is not always explicitly articulated but embodied in the way the household is run, the interrelationships among siblings are woven, the expectations of the parents as articulated in the pro-active and reactive back ups. This variable is independent of parents' socio-economic background because the life stories of participants from diverse background have revealed similar patterns. There is strong evidence here to support the view that in the Mauritian context, the social and cultural capital may to a large extent be overridingly crucial in determining an individual's achievement. These are directly related to the values of the family and dependent on how effective the parenting is to enable children to internalise achievement-oriented values and behaviour. Many individuals with high achievement reported that their parents adopted an authoritative style where discipline is concerned giving children the necessary leeway for experimentation and autonomy.

(ii) Defining a home culture which promotes achievement: Cultural practices established within the home environment includes predominantly dialogue at home and work routines. These define the pattern of interaction within the home environment and outside it and are revealing of the twin values of hard work and delay of gratification. It is interesting to note that the concept of cultural capital in the Mauritian context may include the positive home practices and the cultural resources that the immediate community provides. It is not so much the intellectual climate which becomes prominent in explaining achievement but rather the shaping of people's attitudes and commitment to a particular notion of success. This phenomena has to be understood in the light of the larger national contexts at different periods in time. In popular conception, the advent of free education was considered to be an opportunity for acquiring social mobility. It does appear that there was a differential understanding among communities and families as regards the real potential of this political measure. Some families, through their engagement in community practices, became sensitive to the education agenda. Families, as micro systems, were permeable to the effects of general orientations of the community.

(ii) **Providing the Human and Emotional Capital:** The theoretical position adopted here highlights the importance of the family as human capital. While in the literature human capital is construed as the ability of parents to influence directly a child's learning, the study reveals that another dimension of human capital which has so far not been explored is emotional capital. While it is true that a child's ability to achieve is dependent on the parents cognitive modeling, it is very strongly suggested that apart from intellectual resources, emotional resources are crucial in determining the child's disposition towards sustained effort and hard work. The life stories of participants whose childhood years covers the span of late 70s and early 80s does suggest that many parents did not have the intellectual resources to support their children academically, they have provided emotionally validating environment which were supportive of the child's learning. The emotional richness of a child's life is measured by the availability of enduring, reciprocal and multifaceted relationships

As posited in the conceptual framework, the notion of social capital is understood as being central to our understanding of how the processes taking place in the micro systems. It determines, in the course of time, how the micro system will evolve. The findings have demonstrated that social capital in the Mauritian contexts is derived from interaction with other families and engagement in community activities. Construed as exosystems, neighbourhood and communities have a direct bearing on the life of individuals insofar as the family cultural practices are a reflection of the broader socio cultural influences. Few families, as reported by the participants, operated in isolation. The influence of the neighbourhood/ community cannot be underestimated. It is the dynamics of the interaction between the family and the exosystems which impinge upon the other forms of capital. Indeed, it can be posited that often when children succeeded both academically and in their lives against the odds, it is the community / neighbourhood which provided the alternative role models.

It is strongly suggested here, though it is difficult to measure the relative importance of the individual input versus the inputs of the family and other systems, that the individual success is contingent upon the availability of at least one of those forms of capital. While one can easily construe that availability, on its own, does not guarantee the outcome, it is also nevertheless clear that an individual cannot become successful unless the diverse forms of capital are forthcoming either in the family or in the immediate environment.

Although the way, extent and level of any individual subscription to the different forms of capital available is shaped by the adult and social environment in which s/he grows, there is undeniably a personal factor or predisposition which accounts for why some individuals take advantage of environmental pro-action and others do not.

Chapter 9

Conclusions

The aims of the research were broadly two fold: to establish trends and patterns of achievement and to develop understanding of the processes and intervening factors which operate at the level of the family and the community to promote or hinder achievement:

9.1 General remarks

- There have been generally very negligible or statistically insignificant fluctuations in achievement in an upward direction although sporadic improvements have been registered in certain subjects areas at some levels.
- The remarkable stability and predictability of trends at CPE is disquieting insofar as it appears that stakeholders have devised strategies to beat the system by focusing on specific aspects of the question paper. Given the set format of any examinations paper, in English for example, 60% of students earn 0 marks in essays and a large proportion do not even attempt it, and still score good grades. Benchmarking processes for a pass or a fail have been devised based on a series of graded competencies spread over a period of six years for CPE and it is only after six years of schooling that the inability to demonstrate minimum mastery is formally established. It is probably high time to review the system of automatic promotion at primary level so that learning difficulties are identified early and remedied.
- There exists marked performance differentials at the level of subjects, gender and schools:
 - (i) The data has revealed that achievement levels in French have been higher than any other subjects at CPE, SC and HSC whereas achievement patterns in English is a cause of concern. It appears that students are rarely able to make up for their earlier difficulties and, that the number of students in the higher achievement brackets dwindle systematically as we move up the educational ladder. The better achievement in General Paper in the very same brackets should be cautiously interpreted as GP marks not only language but more weight is allocated to content. The patterns observed raise a number of pertinent issues in a context where English is the official medium of instruction and is bound to affect achievement in all other subjects which require students to express their ideas in English as has been highlighted in examiners reports for EVS and Business Studies.
 - (ii) Students fare poorly in Mathematics at CPE level and a marked shift towards the lower end of the scale has been registered over the period. The % of students in the D and E range has increased by 20% from the beginning till the end

of the period (1990-2004). Failure % has remained more or less stable at 30% at SC although at HSC level 35% score either A or B. Mathematical skills are considered as essential skills which form the basis of logical thinking. The extent of the problem can be gauged by taking into consideration that a D grade at CPE level means that the student has, at most, scored 50%. The fact that around 40% of students coming out of primary schooling have not mastered the ELCs is a sure cause of concern. If one assumes that ability is normally distributed, the data seems to militate against the view that schools make a significant difference in the educational achievement of its pupils. Even with the screening and selection process that takes place as students proceed up the educational ladder, patterns are telescoped from CPE, SC to HSC levels.

(iii) The patterns observed strengthen the opposite view that, in the Mauritian context, educational achievement is determined by factors outside the school. Indeed, even if a consensus is reached whereby the two processes are perceived as interactive, the precedence must be given to the psycho-social approach highlighting the centrality of family background factors in attainment/ and achievement.

(iv) At SC and HSC, Maths, French and Principles of Accounts continue to be, not only the most popular choices but also most scoring subjects. The case of Business Studies, Economics and Biology is exactly the reverse in terms of achievement although Business Studies continues to be very popular, despite the generally poor results candidates seem to produce every year. Two issues need to be underlined here. On the one hand, what strategies have been devised to address the shortcomings in terms of our teacher preparation and continuous professional development and, secondly, how do we ensure that proper career guidance to students at the time of subject selection? There does appear to be a number of myths regarding the facility index of subject and the specific skills that are necessary to succeed. The situation must be considered taking into account the number of manhours and other resources which are injected into teaching the subjects.

- There are relatively striking gender disparities which need to be highlighted. The indicators used signal that boys' attainment is lagging behind girls' attainment at all levels even when the statistics are balanced for initial entry gap. Girls are not only maintaining their lead in 'traditional' subjects like languages, they are also quickly closing the gender gap in subjects where boys traditionally use to dominate. Girls are also more likely to earn distinction in language and have lower failure rates in both Languages and Maths. In science, the % failure for girls is decreasing whereas for boys, it appears to follow a more or less upward trend. The issue at hand is not so much about girls' achievement but boys' underachievement and how to pre-empt the beginning of a problem similar to the one experienced in developed countries.
- These trends should however not obscure the fact that boys in high performing schools still achieve very consistently and that the gender variable become more acutely visible when coupled with variables of school type of low performing private schools in suburban areas. However, in the highest performing state schools, girls maintain their clear lead.

- School type is the third parameter which registered differential achievement. On a first round of region wise of CPE trends across Urban, Rural, Coastal, Sub-urban demarcation, the “school type” effect appears prominently – Urban schools, because of the 5 star schools, lead the way followed by rural, sub-urban and coastal schools. Achievement differentials are widest in English and Maths and lowest in French and EVS. The Confessional, State and Private schools categories showed clearly the lead of State schools in almost all subjects in the high category bracket although for Confessional schools, the distribution is less skewed. No direct conclusion can be drawn, but could we potentially attribute this statistical feature to a different orientation in philosophy of education and the publicly declared philosophy of liberal education and a model of inclusive pedagogy that is claimed to be adopted by the latter.
- The ‘distance’ between Private versus State and Confessional schools must be underlined but interpreted with caution. Confessional and State schools have standards of infrastructure which are comparable. But, such is not the case of private schools where there is a wide disparity among educational facilities, teacher qualifications etc. If these parameters are not monitored/ or accounted for, it is difficult to attribute a causal relationship between school type and educational achievement. Generalizing would then obscure intricate trends.
- In addition to this, there is also the differential clientèle effect given that till 2000, streaming was applied and the best students were absorbed in SC and HSC. If there is already differential intake at entry point, then one can conclude that the school effect is almost null. This is a seriously worrying indication of one, analyses the outcome of schooling in an output-input model.
- Achievement in Sciences also present a dismal picture of low achievement especially in average and low performing private schools. There does seem to be a relative problem of under-achievement in girls’ confessional schools regarding science when their performance in other subjects are concerned.
- One striking feature of the data at the CPE level is the stability around average achievement across subjects, school type and gender. The % of students scoring grade C is remarkably stable and this bracket appears to be totally immunized against change. This seems to be in stark contrast with the well received belief that teachers generally teach for the average students.
- Changes in A and B are mirrored in the D and E grades. The pattern produced in terms of ability distribution is the exact opposite of the bell curve. Why is our system and our schools producing such a statistical pattern? Such a statistical phenomena, which is contrary to prediction, needs to be understood in the light of an examination that has long been constructed as a selection process and our system has been exam driven. Pedagogical processes may have been oriented towards the benchmarks set for examinations rather than curriculum guidelines.
- The achievement patterns produced at different levels coupled with the analysis of examiners’ reports gesture strongly towards poor language skills and an inability to help our

students to think autonomously. The examiners' reports across a number of subjects at both CPE, SC and HSC converge in highlighting the view that many students do not show evidence of having developed higher order thinking skills needed for analysis and evaluation, not to mention divergent thinking/problem solving. The excellent performances of candidates at the higher end of the spectrum, should however be noted.

- The last point relates to our understanding of evaluation and of the function of schools. It was posited in chapter I that one of the reasons for mapping achievement was to assess the returns of the country's investment in education. Though it was acknowledged that the benefits of education could not be measured at a point of time but over time, it was also underlined that, in Mauritius, the only concrete measure of achievement was the trends of students' performance at the level of end of cycle examinations. The picture which is produced reveal a dismal pattern of achievement heavily tilted at the lower end of scale. Using the educational production function approach it seems empirically legitimate to claim that returns on the national investment is very low in quantitative terms.

- The questionnaire revealed that the educational achievement trends of the sample for the period under study match the findings of the population data obtained in the first part. Low achievement in English is carried over till the end of schooling whereas achievement in Mathematics is reversible. Such data is supportive of the socio-linguistic approach to language learning. The inadequacies of the social environment appear to be a serious hindrance to language learning which may explain the irreversibility of trends in English.

- In conformity with the existing literature which posits that the role of the family is central to explaining achievement, the data from both survey and case studies reveal the variables of parents education do impact on both attainment and achievement. But these variables are located within a complex social matrix consisting of the peers, neighbourhoods and communities.

- Parents with a higher educational attainment were more likely to meet teachers to learn about their children's performance. A large number of parents only visited the schools on open days and their basic concern was academic achievement. It appears that parental involvement is often perfunctory and reactive rather than pro-active and informed. Parental involvement is construed as a key factor impacting on education in the current research landscape and has not been given enough attention in the Mauritian context. The systemic deficiencies in this regard needs to be addressed

- The role of parents in setting high expectations and creating a home atmosphere which is conducive to achievement motivation has been established in the case studies. High educational and life achievers have had parents who have taught them at an early age the skills and values which have effectively prepared them to face the demands of school or work. Parents who encourage autonomy and initiative foster a strong sense of self and high efficacy.

- Participants whose parents demonstrated high level of "demandingness" together with support have achieved more, although there is a hint that authoritarian parents may very well work against the achievement of their children. A strong and strict discipline set with

clearly defined parameters in early years strongly influence children's perception of themselves and their later attitude towards efforts and delay of gratification.

- The life stories of some participants whose parents were not highly educated indicate that low educational achievement of parents was not necessarily a barrier to achievement of their children. The home lifestyle defined in terms of discipline and belief in hardwork and the worth given to education could also make up for formal educational achievement.
- Families have themselves been heavily influenced by the overarching principles and values set by their neighbourhoods and communities. The social worth of education has been highlighted in some neighbourhoods and communities while they have been discounted in others. The neighbourhood and community effects could offer a partial explanation to the patterns of achievement of schools in sub-urban and coastal regions as compared to urban and rural regions. Family capital appeared to have been a derivative of social capital and both strongly impinge upon life trajectory.
- Social Capital is articulated in terms of access to free tuition, educational resources, networking and availability of high achievers as role models in the micro and meso system. The provision of these seem to have enabled single headed families or families with low resources to overcome their initial "deficiencies".
- Some individuals succeed against all the odds and despite their families and neighbourhoods. The intrinsic drives related to own personality as well as the availability of positive role models within the micro and meso systems also enhance the chances of success.
- Peers seem to have played a crucial role in life of respondents. The data has revealed that the peer group can influence educational expectations and aspirations as well as provide a support system whereby vital educational information is transmitted and decisions taken. Peers could also provide enhanced motivation whether they function on competitive and collaborative lines.

9.2 Food for Thought

Two central issues have emerged from this study:

- (i) The blatant underachievement of our system. Starting from the premise that ability is normally distributed in our student population at primary level, it is clear that our schools are not enabling the realization of the innate potential of our children. Indeed, schools appear to be doing exactly the reverse! The entire system needs to be overhauled and a completely new paradigm adopted instead of a piecemeal approach. If we are at all serious and honest, as a nation, in our belief that education can transform our economy and society, we demonstrate the courage to do away with bureaucratic, and often, political resistance emanating from interest groups whose main priority is the maintenance of their supposed privileges. **The system of education must be emancipated from the political and bureaucratic inertia which has characterised it and produced the patterns of achievement.** Schools as agents of change must do more than lip

service by embracing fully the new roles which are being charted out. Blaming the parents and the society for its inability to make any difference in the lives of children is indication enough of a self-complacency which has compounded our problems. However, schools must be empowered to take decisions at diverse levels and become vibrant communities.

(ii) The micro and meso processes at the level of the family described here belong to a particular setting and time. While there is a strong case for re-dynamising parental involvement and educating parents as to how they can become facilitators, we must also acknowledge that there is a limit, in today's economic and social context, to what homes and some parents can do. The school will necessarily have to take up new roles and develop those socio-emotional skills which families and neighbourhoods used to teach. For this to happen, the school must itself function on community lines on the lines of a *Gesellschaft* institution not a bureaucratic and contractual one. Buffer institutions like socio-cultural organizations, clubs, etc must be revived because they do have a crucial role to play but they cannot replace the schools in providing the missing link.

9.3 Recommendations

Based on the findings of the research it is recommended that:

- (i) There is a need to revisit assessment procedures in order to enable a more comprehensive measurement of the outcomes of educational achievement in the broadest sense of the term. Assessment for *learning must be construed as central to enhancing the efficiency of our resource use instead of only Assessment of learning*.
- (ii) The system of automatic promotion must be revisited and even discarded altogether in primary because it compounds the problem of failure.
- (iii) Poor educational achievement must be addressed by all stakeholders concerned and teachers must be supported in proposing strategies which account for individual differences. At entry point, it is suggested that a profile of strengths and difficulties of the child be drawn and used by the teacher to document progress or shortcomings.
- (iv) Continuous professional development for teachers must be envisaged for all teachers at all levels. Emphasis must be given to training in remedial education.
- (v) Quality Assurance procedures which are both output and processed oriented must be applied at all levels of the educational sector.
- (vi) Language teaching must be seriously revisited to integrate innovative pedagogies which are based on an approach which seeks to develop generic language skills rather than a particular content. The teaching of English must be

revitalized as it is the medium of instruction for all other subjects and prevent our children from achieving their full potential in other subjects.

(vii) Concrete and realistic benchmarks and achievements targets must be set every year and the responsibility equally shared by the school and parents. The government must seriously consider the introduction of legal structures compelling parents to be involved on a number of occasions and as and when the achievement or behaviour of their children warrants it. This is of course a short term and radical measure.

(viii) A new boost must be given to parental involvement in their children's education either via the formal channels of the school or via community-based organizations. There is a need to strengthen the community to support parents in the education of the children.

(ix) Systemic deficiencies at all schools levels which keep parents at arms length or even exclude them from involvement in academic and socio-scholastic enterprise have to be urgently addressed.

(x) Parents must be given the skills to guide their children and to communicate with schools and teachers. Parental education programmes must be intensified. Models of success of programmes run by governmental organizations and non governmental organizations must be extended.

(xi) A media campaign could be organized and public forums established to support schools' effort in involving parents. A bridge must be created whereby the expectations of schools and the conditions for success are conveyed to parents.

(xii) Mauritius must participate on a more regular basis in international surveys regarding achievement in key skills at primary level in Maths, Language and Science to ensure the quality of educational outcomes.

(xiii) Lack of both accountability and control perpetuates a wasteful and self defeating system. It is imperative that all agents within and outside the formal system become accountable and take responsibility for educational achievement

(xiv) A National Inspectorate as an instrument for monitoring, guiding, scaffolding and evaluating academic performances has been more than overdue. It is not only imperative to, once for all, set it up but also, to make it fully functional and effective

(xv) There is need for Regional Directorates to produce mandatory reports of overall performances indices and educational achievement trends in the respective zones and take up remedial/corrective measures.

(xvi) Teacher Associations, in the guise of professional bodies, need to be encouraged to assume a central stance to issues pertinent to teaching and learning.

(xvii) Heads of School need to have regular meetings with staff to address broad curriculum development issues to produce better educational achievement scores.

(xviii) Schools need to produce yearly achievement reports and plough back their own recommendations, into the Teaching and Learning processes.

(xix) Results breakdown for all schools must be made public and have to be posted in Regional Centres and on respective schools notice boards. There is need to analyse quality rather than misleading percentage rates.

(xx) There is need to address the general reading habits or its deficiency in Mauritius. The culture of reading need to be packaged and proposed to the Mauritian population at large as a congenial and strategically appropriate instrument to foster greater intellectual development.

(xxi) The assessment of private tuition and its impact on educational achievement needs to be researched to produce a true picture of schools' efficacy at producing academic results.



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