

Mapping Educational Achievement in Mauritius

Team members

Lead Investigator:

Dr H. Mariaye (Senior Lecturer, MIE)

Collaborator:

Mr Y. Tengar(Senior Lecturer, MIE)

Statistician: Mr R. Ramnauth,

Mrs K. Ernest (Graphic Designer, MIE)

Aims 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**.

Aims Phase II

- To map the **contextual influences** on the local Educational Achievement configuration.
- To conceptualize the roles of socio-religious **institutions/ 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**.

Phases

PHASE I Quantitative

Results CPE, SC and HSC- Focus on Mathematics and English

PHASE II
Quantitative and Qualitative

Stage I

Questionnaire : investigating factors which affect achievement

Stage II-

CASE STUDIES of particular profiles

Phase I- Stage 1

- *Aims*- Patterns in terms of achievement at the level at three end of cycle examinations over a period of time

Source of data:

Anonymous Individual entries from MES at CPE level with four or five subjects coded on a school wise basis, gender basis. Results in the form of grades and not marks

Subject entries for SC and HSC level

Phase I-Methodology

Methodology:

Data obtained constructed in a data base with respective criteria defined along the lines of gender, school type etc.

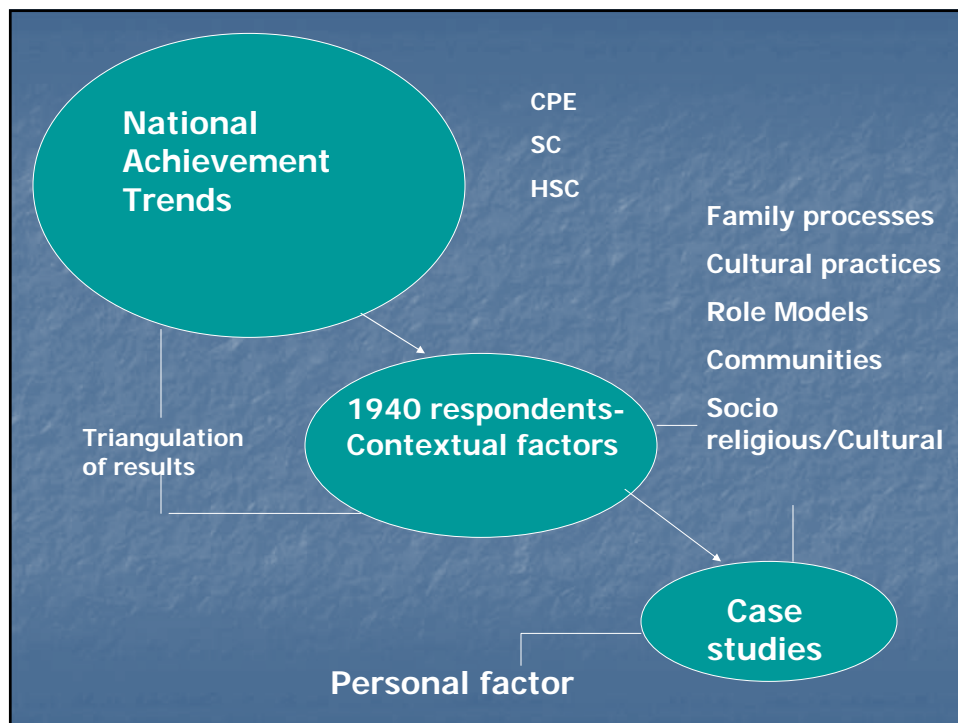
Relevant tables of aggregates mainly counts were extracted with respect to the pointers identified

Phase II- Stage I Questionnaire

- **Aims-** to map the contextual influences on the local achievement configuration in terms of **family processes, neighbourhoods, communities, peers, role models**
- **Methodology-** Survey of 1940 respondents aged between 25-35 and stratified random sampling was used to ensure "representativeness"
- Questionnaire devised focusing on parameters defined by existing literature
- 52 field assistants involved over a period of nine months

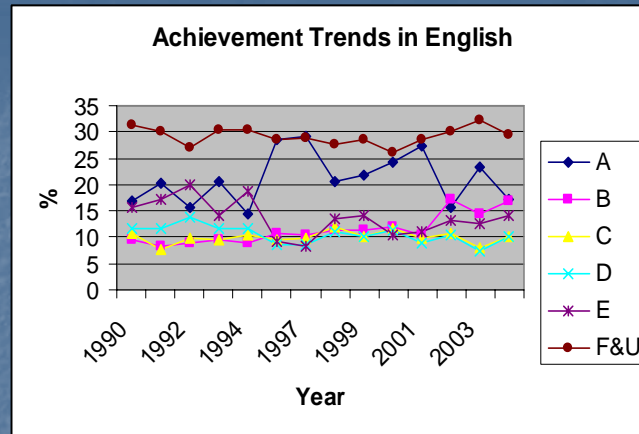
Phase II- Stage I Case studies

- **Aims:** investigating typical family traditions of childrearing, up bringing and the cultural practices herein
- Profiles and selection
- **Methodology** – investigation of life histories



Summary of findings

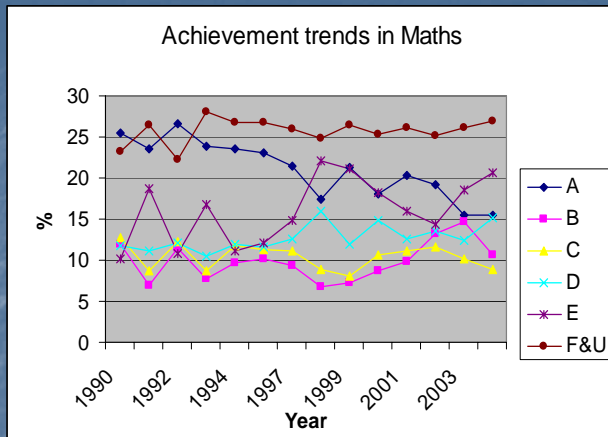
Phase I



Averages in terms of Categories

High	Average	Low	Fail
32.2	10	28.6	29.2

2006:
 Low: 15%
 Fail: 23.3%



2006 -
33.3: Low
20.1: Fail

Averages in terms of Categories

	High	Avg	Low	Fail
	31.9	12.4	29.9	25.8

Overview of Means over the Years

Averages in terms of Categories				
	High	Avg	Low	Fail
Maths	31.0	10.4	28.9	25.8
English	32.5	10.0	28.9	29.2
French	40.9	10.4	19.3	25.2
EVS	33.5	10.4	24.3	27.5
OL	29.7	8.2	26.3	30.7

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

Average % level achieved over 14 years across subjects

	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

The data reveals that on average :

- (i) 53 % earn a maximum "D" in English,
- (ii) 45 % in French,
- (iii) 54 % in Mathematics,
- (iv) 52 % in EVS and
- (v) 57 % in Asian languages.

earn a maximum "D"

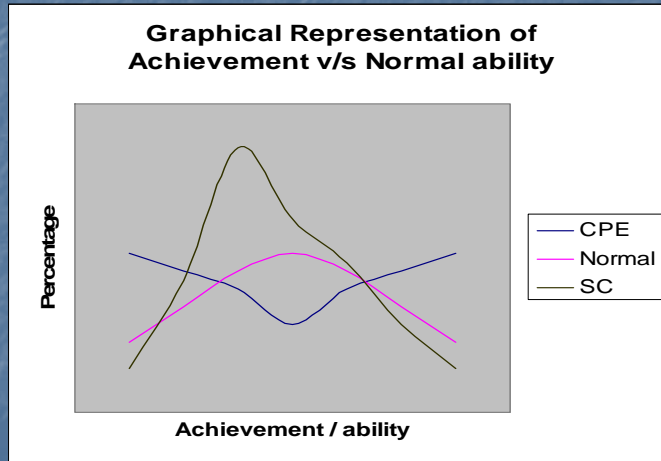
Points for Reflection

All subjects: 50% of students taking part in CPE examinations scoring a maximum of D, that is less than 50 marks

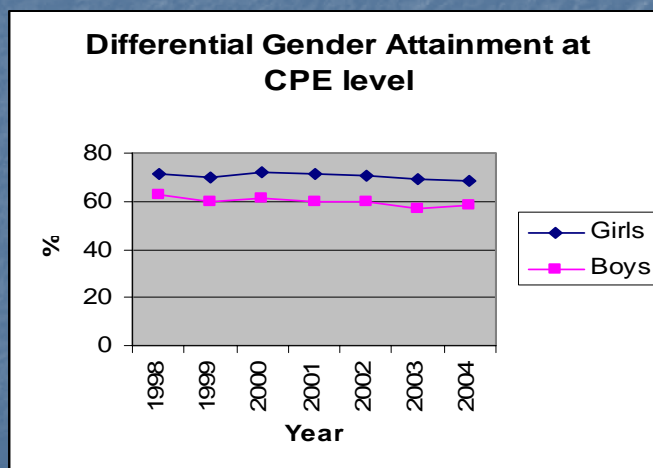
60% ELC and 40% DLC- Implications in an era of resource crunch

25% of students on average do not attempt the writing exercise in either French, English or in oriental languages : Beat the system strategies ?

The Phenomena of inverted Bell curve



Analysis by sex



Male Underachievement in English			Female Underachievement in Mathematics		
A&B	C	D&E	A&B	C	D&E
-1.4	0.0	1.0	-0.2	0.9	-0.7
0.2	0.4	-0.6	-1.9	0.6	1.3
-1.1	1.0	0.0	-1.4	0.7	0.7
-1.9	0.7	1.3	-1.4	1.3	0.1
-2.4	0.9	1.5	-1.6	-0.6	2.2
-0.1	0.1	0.0	-4.0	0.1	3.9
-5.3	1.3	4.1	-0.5	1.0	-0.6
-4.8	-0.7	5.5	-0.3	1.6	-1.3
-2.9	-1.5	4.4	-1.1	0.5	0.6
-4.6	0.6	4.0	-1.2	0.9	0.4
-7.9	1.4	6.5	1.0	0.8	-1.8
-6.1	0.8	5.3	0.9	1.0	-1.9
-9.5	1.2	8.3	2.3	-0.1	-2.2
-7.1	0.7	6.5	-0.4	1.1	-0.7

Highlights

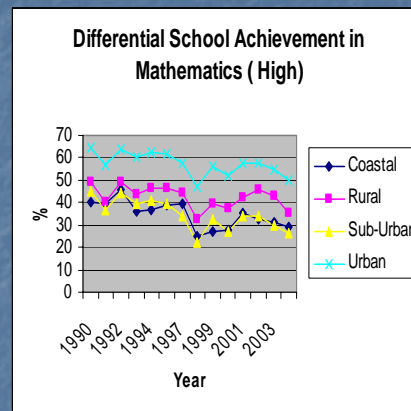
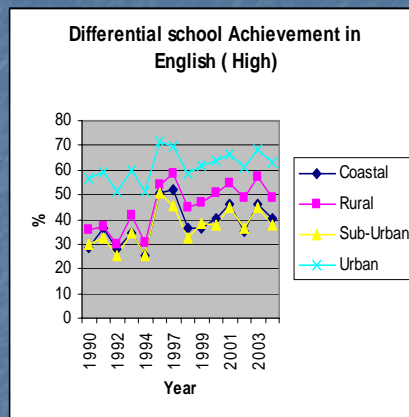
The Boys-Girls Gap is **always smaller** than the Girls- Boys Gap

The Boys-Girls gap is closing in

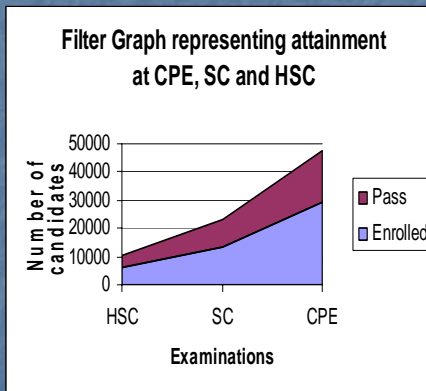
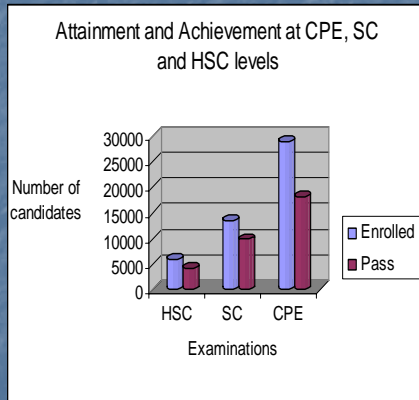
Girls are doing better **qualitatively**

Distribution among geographical regions

	Coastal	Rural	Sub-Urban	Urban	Total
Average	8.4	47.3	14.7	29.6	100



SC and HSC Statistics- Major trends



Highlights

Technical subjects lower failure trends though not necessarily better performance in the higher brackets (sd)

Poorest achievement in **English**, Business studies 50% achieving only a pass at SC and 40% Business studies not clearing the exams at HSC (sd)

Gender gap generally clearly in favour of girls as we move along the educational ladder- less % girls failing. (gd)



Highlights

School effect for girls reinforced in terms of State, Private and Confessional schools. **Girls state schools** clearly have a lead in **science**. (comparison of likes with likes and intakes)- SCD

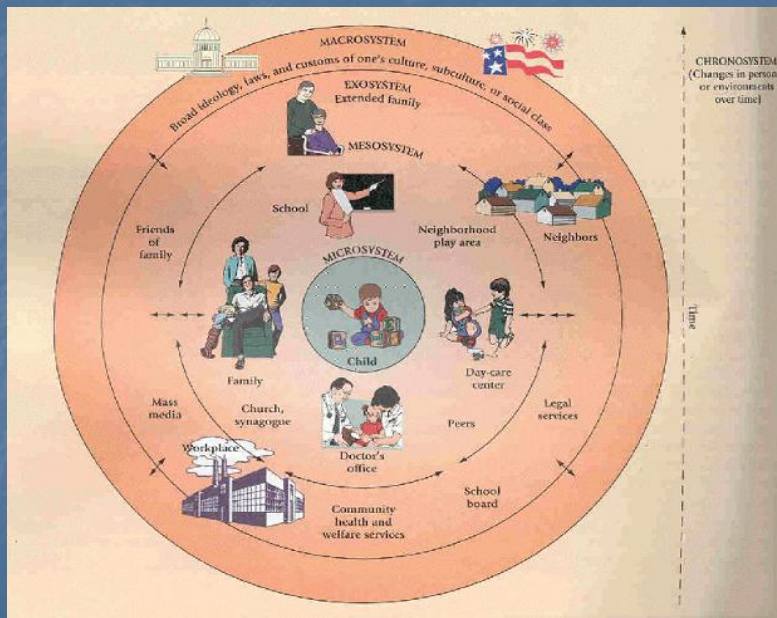
State schools have the best performance in the Best Achieving school category, the achievement of students in confessional schools are, more often than not, **more equally distributed** across grades . SCD



Reflection

- Underachievement? **Patterns in English** and Mathematics telescoped from CPE, SC and HSC despite the screening process- (Examiners report)
- Stability around average achievement at CPE
- **Inverted Bell Curve**- ability distribution and achievement- the missing link?
- School effect v/s zero effect
- Gender disparities
- **Dismal picture** of achievement if we base ourselves on the only indicator that we have- results

Phase II- Conceptual Framework



Focus Questionnaire lay out

Measures of Human Capital

Coaching
Encouragement
Participation in community activities
Parents own reading habits

Measures of cultural capital

Reading materials
Access to libraries
Clubs
Recreation
Nature of conversation at home
Discipline

Measures of social capital

Structure and number of ties
Closeness of relationship
Access to help from grown ups
Help and support from Neighbourhood and communities

Phase II- findings

The data regarding results confirm the findings from Phase I

Low achievement in English is carried over whereas low achievement in French is **reversible**



The survey reveals that variables related parental education impact on attainment but within a **complex** social matrix

Phase II- findings Parental involvement indicators

Indicator
Providing financial resources
Coaching for your homework
Looking for private tutors
Providing encouragement
Helping you to set targets
Helping you plan your career

Findings

Intergenerational mobility

There is a **positive relationship** between level of **attainment** of parents and that of respondents

Mother's educational attainment has **stronger influence** than the father's educational attainment

Teachers, fathers act as role models

The role of peers **construed overridingly** in terms of **collaboration** (42%)

Findings

Father's contribution in terms of **financial support and private tutors**

On all other criteria, mothers' contribution is **more significant**

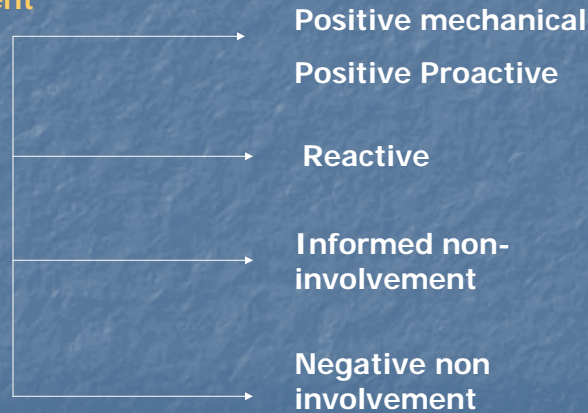
Parental involvement generally **on the decline** (intergenerational transmission)

Respondents which educated parents have shown **higher levels of achievement** translated through variables of better **financial resources, coaching and setting targets for the future**

Parents with only primary education contribution has only been construed in terms of financial provision

Findings

Typology of Parental Involvement



Families and cultural capital

Cultural capital translated in a number of practices
Creation of a conducive home atmosphere
Preparation for **cultural adjustment** to the school
Specificity of the Mauritian context- **proximity of community and involvement in group activities**
High level of **demandingness** and **support**
positively related to high life and academic achievement

High achievement in the Mauritian context seem to nested in the following matrix

Parental characteristics:

transmission of values, skills (**deferred gratification**)

Encourage **autonomy** and **sharing** of home responsibilities

Home lifestyle defined in terms of **discipline, belief in hardwork**

High achievement in the Mauritian context seem to nested in the following matrix

Families have themselves been influenced by the overarching principles set by **communities and neighbourhoods (at risk neighbourhoods- social worth of education)**

Family capital appears to have been a **derivative** of social capital

Some individuals succeed **against all odds-** intrinsic drives related to personality and availability of positive role models

The Peer Group

Synergistic role and the major source of human capital

Provision of role models

Significant others in the social spheres

Question: Our social sphere shrinking?

Implications

Personal Characteristics

Sense of purpose or future

Positive Self Concept and Self Esteem

Self efficacy

Ability for **empathy and social competence**

THANK YOU