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THE UWI-TRINIDAD AND TOBAGO RESEARCH AND DEVELOPMENT IMPACT FUND

SYMPOSIUM ON RESEARCH ENTERPRISE & IMPACT

The Schools Facing Exceptional Challenge Project:

Improving low performing schools in the Republic of Trinidad & Tobago

- Jerome De Lisle-School of Education

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Confronting inequality in achievement within nation states

- There is worldwide concern over sharp and persistent differences in educational achievement within nation states.
- In the last decade, policy papers addressing this issue include Ben Levin's treatise on equity for the OECD in 2003 and Emiliana Vegas World Bank text on *Raising Student Learning in Latin America.*
- In the Caribbean, World Bank Reports in the 1980s pointed to achievement inequality in Trinidad and Tobago, although high quality evidence was limited.

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When reality strikes

- The reality of the magnitude of achievement inequality confronted us when the MoE began to develop performance standards for the national tests in the primary school system in 2005.
- We had used multiple standard setting approaches, and we were very surprised by the wide variation in performance across schools and districts on all approaches
- We began to theorize about the salience of place (geographic space imbued with characteristics) for educational achievement across Trinidad and Tobago

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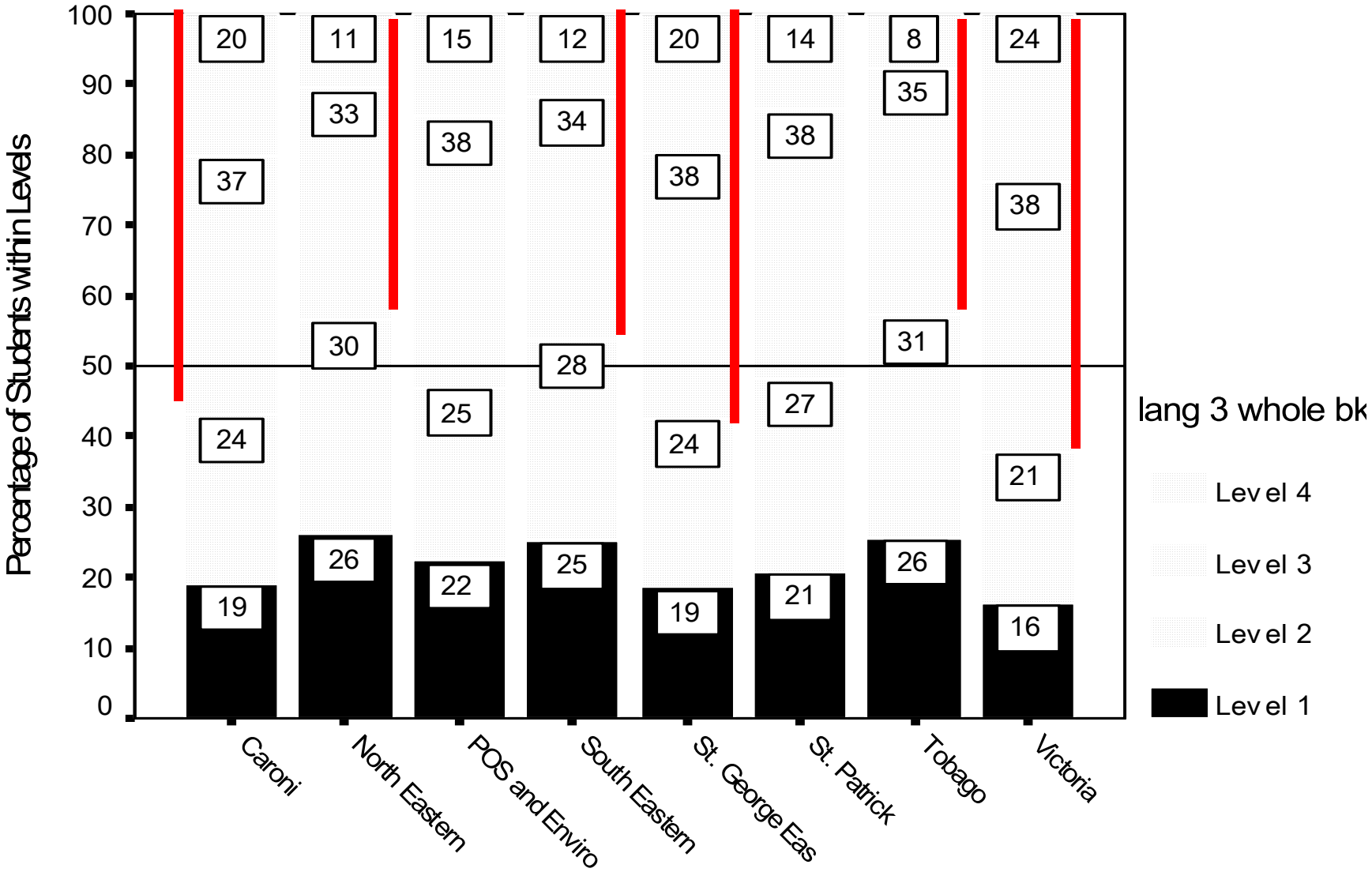
Graph showing Achievement Levels in the 2007 **Std. 3 Language** by **Educational District**.

Whole Booklet Classification Methodology



Learning to Communicate

- We began work on developing simplified measures to capture and communicate school performance effectively.
- We also wanted to connect underachievement with possible poverty concentration in specific institutions.
- Our work led to the development and validation of a single index of achievement derived from the distribution of students at different achievement levels for literacy and numeracy within an institution (Used standards based information).
- This metric called the **Academic Performance Index (API)** is simple and transparent, but very imperfect when used alone.

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From resistance to increasing use

- The API developed in 2006 was officially accepted by the MoE in 2010.
- As early as 2007, it was used to identify 100 of the lowest performing schools for intervention and in 2009 to construct the sample of 60 schools for the Seamless Education Project. We also developed and tested the utility of a value added API measure (index and graphical figure) and indicators of disadvantage based on the *Basic Needs Index* and the *numbers receiving free lunch*.
- Today, the API with its descriptors are now widely used The API measure of growth was introduced by the MoE in 2011.

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Employment (100)
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Computers (4)
Notices (2)
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Miscellaneous (25)
Second-hand stuff (1)

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Math, Literacy grades improving

By NEWSDAY STAFF Tuesday, December 18 2012

THE overall Mathematics and Literacy grades of Standard One and Three students have improved as well as the general performance level of schools in Trinidad and Tobago for 2012, according to Education Minister Dr Tim Gopeesingh.

Speaking at a press conference yesterday at the Ministry of Education, St Clair, the minister explained that literacy has improved by about 50 percent and Mathematics by 40 percent in Standard One and Three this year as compared to grades in 2011.

This percentage was derived from the 18,542 Standard One, and 19,948 Standard Three students who wrote the National Test this year.

click on pic to zoom in

IS IT ON?: Prime Minister Kamla Persad-Bissessar tests one of the laptops on display at the Job and Career Coach Launch held yesterday by the Tertiary...

"There has been significant gains in the education system in both literacy, and numeracy in Standard One and Three, and that is predicting well for the future," Gopeesingh said. He further added that based on the Academic Performance Index (API) which assesses a school's overall performance level, schools in the excelling category have improved by 800 percent from 2011 to 2012, and schools in the academic watch category have decreased by 80 percent.

API, which is calculated annually, groups primary schools in four categories of excelling (superior academic performance), mostly effective (satisfactory academic performance), academic watch (marginal academic performance) and academic emergency (inadequate academic performance).

The minister stated that no primary school fell under the academic emergency section and, "there was a large shift in the number of schools under academic watch moving into the mostly effective category, and schools in the mostly effective category moving into the excelling band."

Top stories
- Ramkessoon still optimistic of Red Force
- 'BABIES CARRY DISEASES'
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- Tobago man in court on arson charges
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RSS
XML RSS 2.0
What is RSS ?

Crisis Hotline

Birth of the Project Idea

- We first wanted to help the Ministry of Education use data better, so we proposed a joint in-house project to study schools facing exceptional challenge.
- Although similar studies had been reported in Canada and the UK, our work was informed by the LLECE project in Latin America and the work on support systems for low performing schools in South and Central America.
- When the RDI fund was proposed in 2007, we submitted the same proposal and earned some seed money. Scholarship students from the Training Colleges enrolled in the B.Ed. Programme volunteered their assistance and we combined additional funds from other projects.

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Collective Capacity- Origins, Destinies & Impact

- **UWI Staff**
- Carol Keller (Deceased)
- Vena Jules
- Krishna Seunarinesingh
- Raymond Hackett
- Phaedra Pierre
- Samuel Lochan
- **DERE, MOE, Staff**
- Yvonne Lewis (Former DERE Director)
- Pat McDavid (DERE Assistant Director)
- Peter Smith (Testing Officer)

- **Core Students (Formerly Undergrads)**
- Rinnelle Piggott (PhD Student Nottinghamshire)
- Sabrina Solomon (UWI Ph.D. Student)
- Rhoda Mohammed (DERE/UWI PhD Student)
- Kamini Bhagaloo (DERE/UBC M.Ed Student)
- Alicia Batchasingh (UWI PhD Student)
- Deon Rodriguez (Teacher/UWI Mona M.Ed student)
- Isabelle Burris-Paul (Teacher of the Year, 2011)

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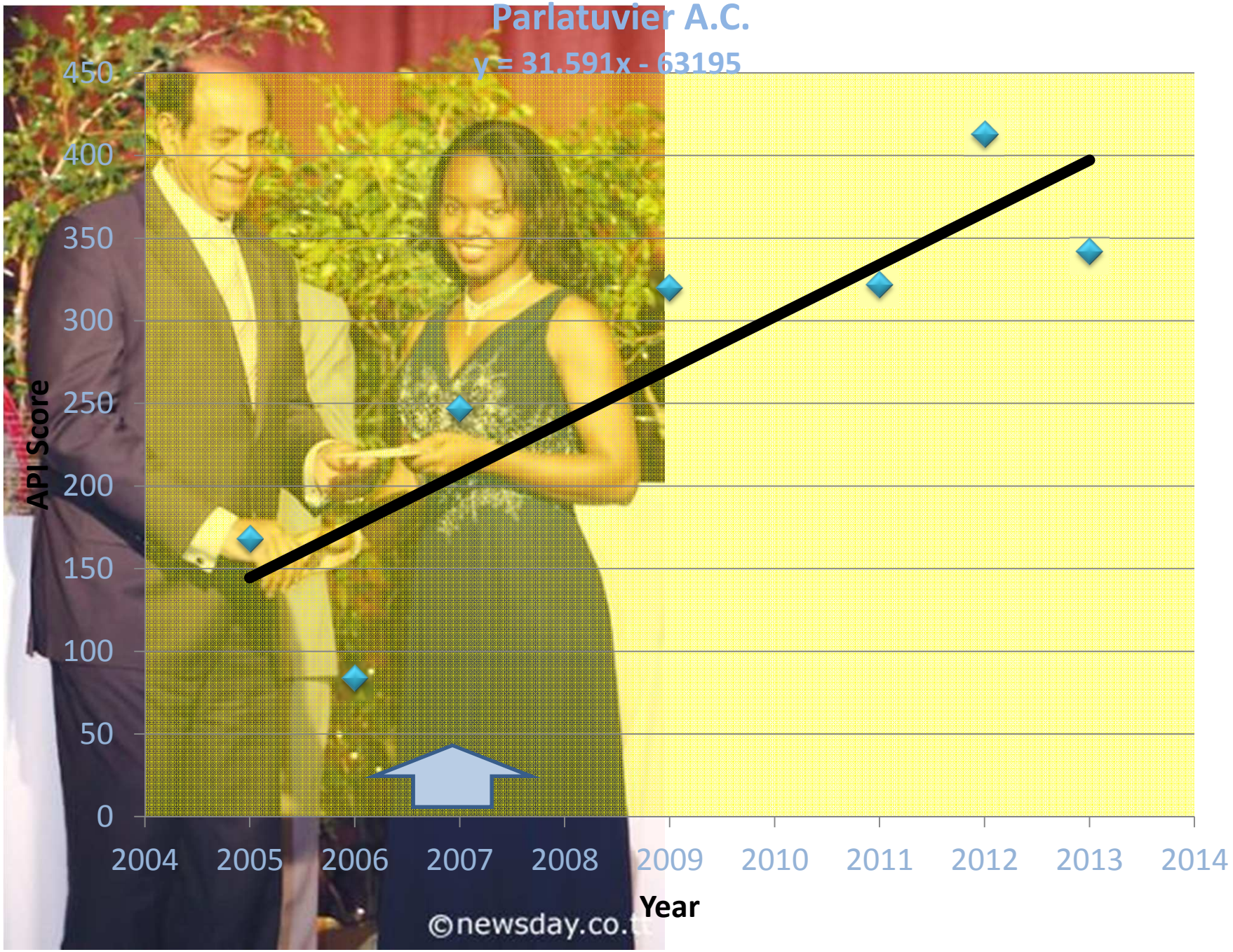
Parlatuvier A.C.
y = 31.591x - 63195
API Score
450
400
350
300
250
200
150
100
50
0
2004
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
Year
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What was the project about?

- The research programme consisted of three individual projects
  - Identifying schools facing challenge using National Test data (low and declining performance, concentration of low disadvantaged students, location)
  - Understanding the nature of education practice in schools facing challenge
  - Interrogating the challenge of turnaround for these schools

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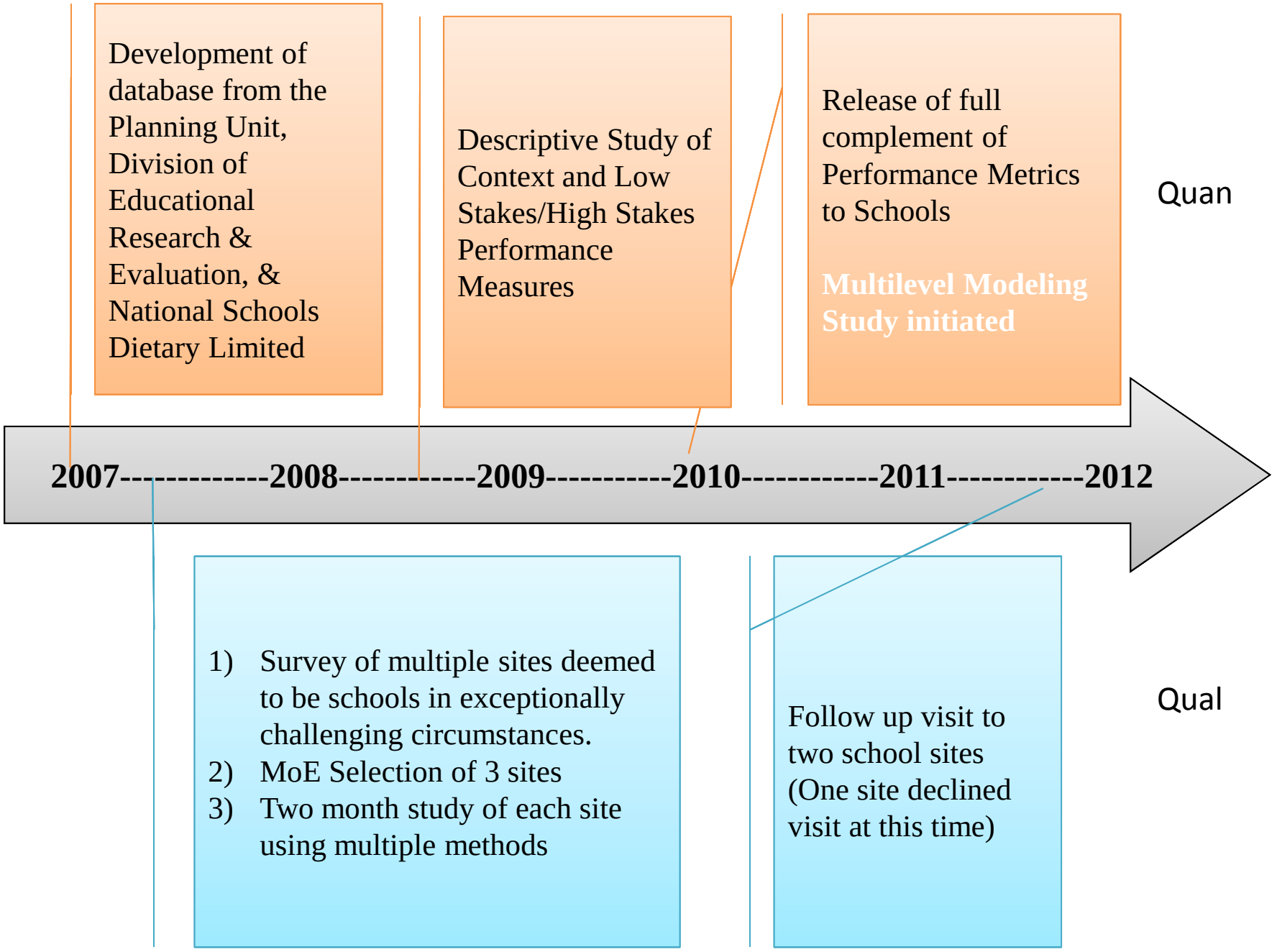
Development of database from the Planning Unit, Division of Educational Research & Evaluation, & National Schools Dietary Limited
Descriptive Study of Context and Low Stakes/High Stakes Performance Measures
Release of full complement of Performance Metrics to Schools
Multilevel Modeling Study initiated
Quan
2007----------2008----------2009----------2010----------2011----------2012
1) Survey of multiple sites deemed to be schools in exceptionally challenging circumstances.
2) MoE Selection of 3 sites
3) Two month study of each site using multiple methods
Follow up visit to two school sites (One site declined visit at this time)
Qual

Methods & Approaches

- The research programme adopted a complex mixed methods approach to capture fully all the dimensions of school effectiveness. Thus, both words and numbers were used and integrated for a fuller picture.
- The mm design followed the work of Morse and Niehaus (2009) and employed an overall inductive thrust
  - quan->QUAL+quan->QUAL(quan)

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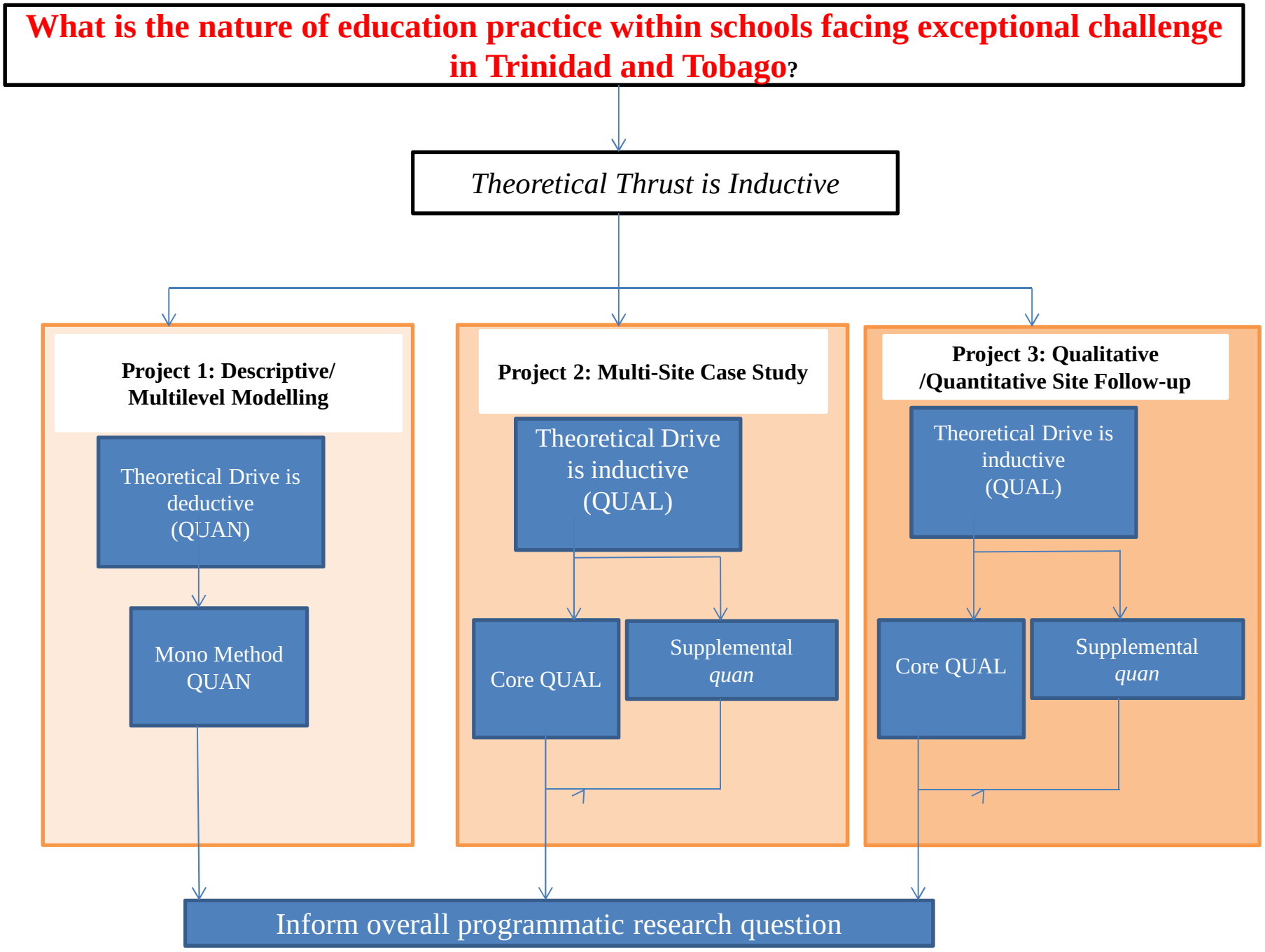
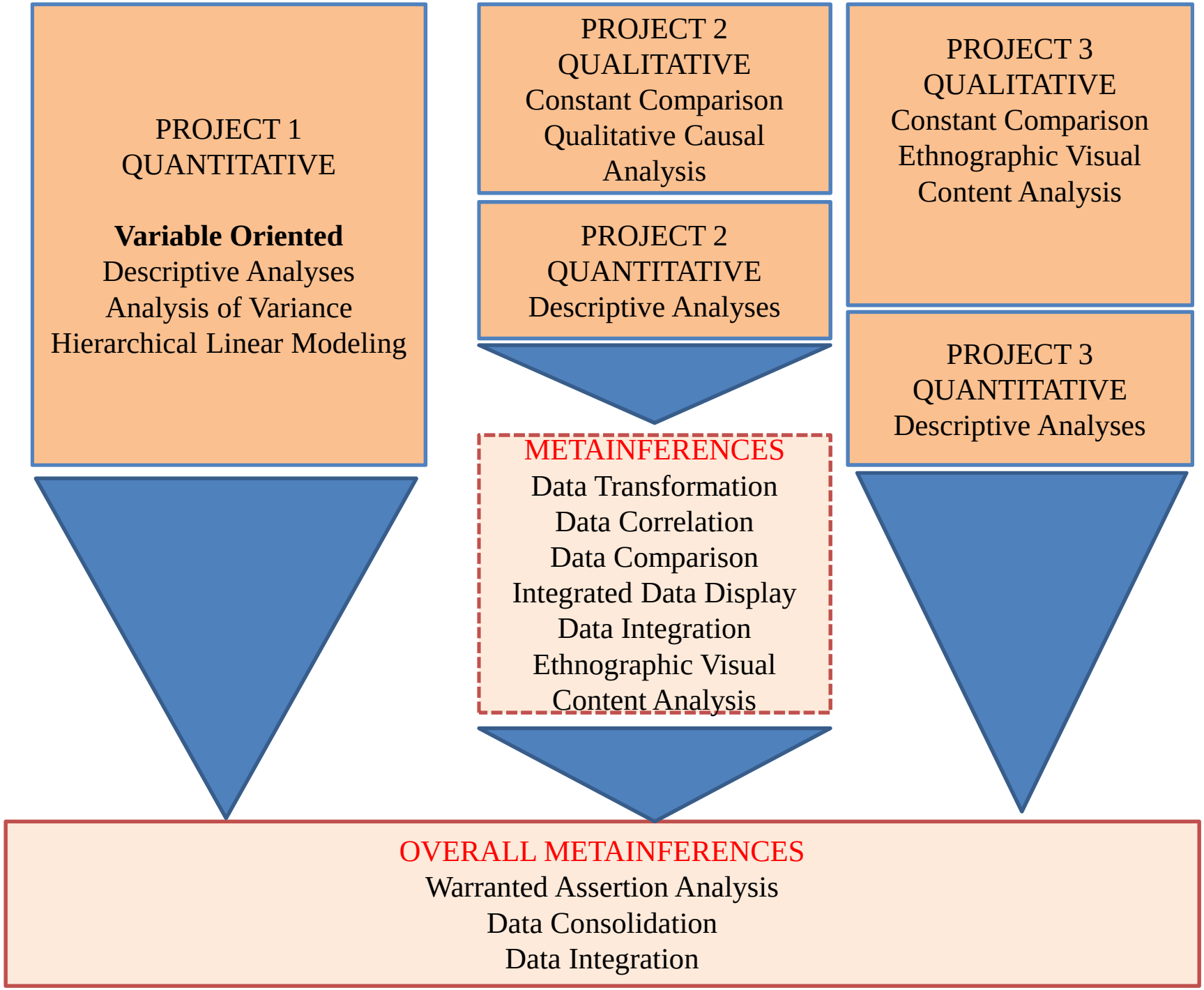

What is the nature of education practice within schools facing exceptional challenge in Trinidad and Tobago?
Theoretical Thrust is Inductive
Project 1: Descriptive/ Multilevel Modelling
Theoretical Drive is deductive (QUAN)
Mono Method QUAN
Project 2: Multi-Site Case Study
Theoretical Drive is inductive (QUAL)
Core QUAL
Supplemental quan
Project 3: Qualitative /Quantitative Site Follow-up
Theoretical Drive is inductive (QUAL)
Core QUAL
Supplemental quan
Inform overall programmatic research question


PROJECT 1
QUANTITATIVE
Variable Oriented
Descriptive Analyses
Analysis of Variance
Hierarchical Linear Modeling
PROJECT 2
QUALITATIVE
Constant Comparison
Qualitative Causal
Analysis
PROJECT 2
QUANTITATIVE
Descriptive Analyses
PROJECT 3
QUALITATIVE
Constant Comparison
Ethnographic Visual
Content Analysis
PROJECT 3
QUANTITATIVE
Descriptive Analyses
METAINFERENCES
Data Transformation
Data Correlation
Data Comparison
Integrated Data Display
Data Integration
Ethnographic Visual
Content Analysis
OVERALL METAINFERENCES
Warranted Assertion Analysis
Data Consolidation
Data Integration

Outputs & Transfer

Phase	Knowledge generated	Knowledge transferred/to be transferred
Phase 1	Utility of API as a metric SES school measures	❖ API ❖ API Growth Measure ❖ Descriptors for Categorizing Schools
Phase 2	Nature of low achievement in school facing challenge in rural and urban areas	❖ Salience of school-community-family interface ❖ Need for integrated interventions ❖ Need for early interventions ❖ Need for MoE support to get schools out from Academic Watch
Phase 3	Nature of turnaround challenge	❖ Principals' understanding and use of data key ❖ Effective Levers for change ❖ MoE and District target setting and support systems

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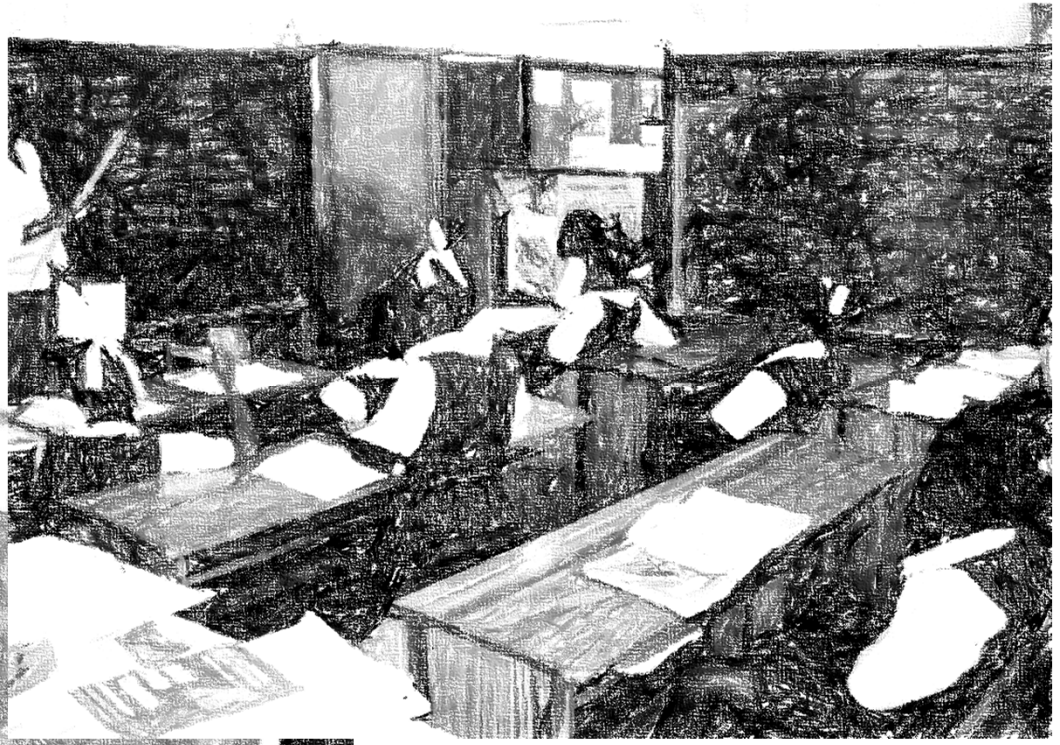
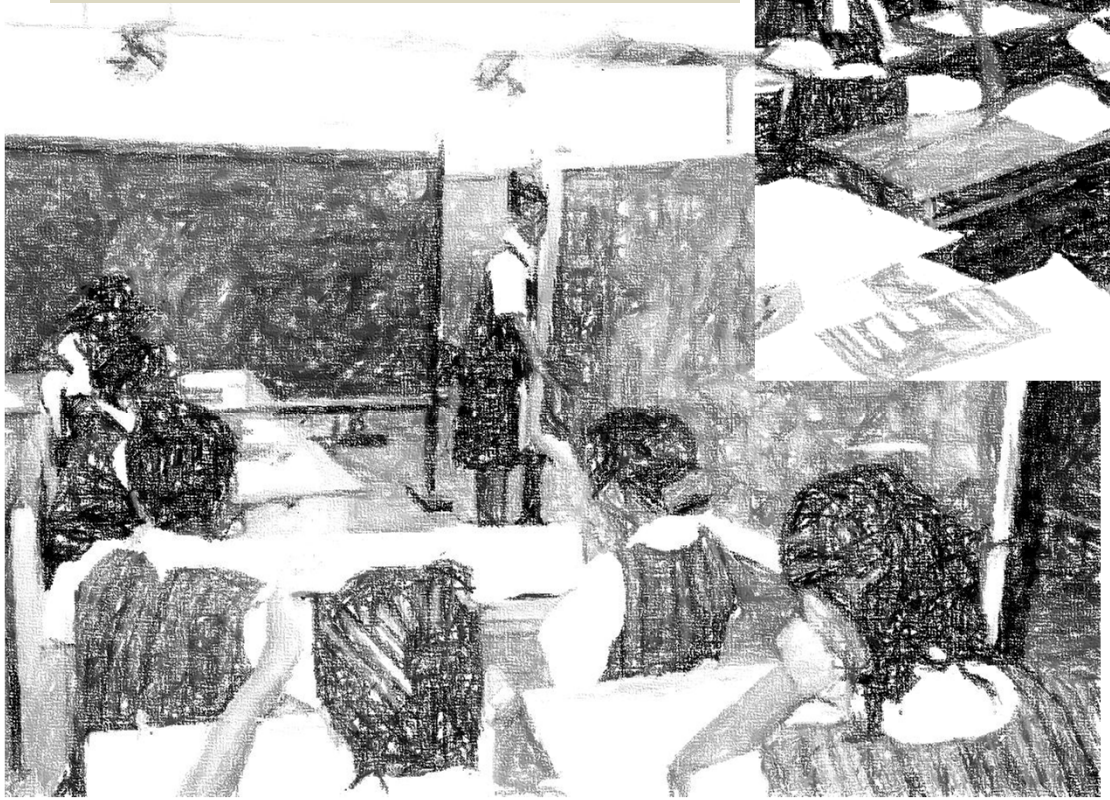
Interesting Finding on Education Practice:
Are these Schools just hollow shells?

In Standards 4- 5, students review practice tests as THE major classroom activity. Absenteeism is low. There is much greater engagement.





In Standards 1-3, whole class instruction is dominant mode-engagement is low, absenteeism is very high.

Lessons Learnt

- Some performance metrics, such as the API, may be successfully transferred to Public Agencies because of its simplicity. However, simple and transparent measures are subject to greater measurement error and must be interpreted cautiously.
- There is greater resistance by Public Agencies to indicators that contradict common ways of thinking such as metrics measuring the amount of disadvantaged students in a school (commonly used in Latin America & the Western World).
- Nevertheless, data can challenge some long-held myths such as "*denominational primary schools do better*" or '*girls do much better than boys in all subject areas*'.

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Lessons Learnt

- Data can also be empowering for stakeholders if it provides understandable information that leads directly to action.
- Not all data, however, is equally informative leading to useful and sustainable change -- A lesson learnt from comparing the utility and impact of the "under 30% indicator" used in 2007 to 2009 with the API.

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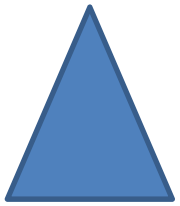
Basically what I found is that the school has grown. Even though it's a small incremental growth I have definitely seen improvement. Looking at the boys from when I came, which is 2008 to now, I have definitely seen an improvement (Female Principal, Boy's School)

We are on academic watch. Let us just deal with it and we have started to put things in place. I firmly believe that if you have a patient and that patient is critically ill you follow, you make the right interventions, and we knew it would happen. You do the right things and your patient will not die. You understand me? So that's the way I looked at it. I expect that you'd do whatever and the patient would jump out of bed and would be healed in a year or two. I expected that we make the right interventions and do that consistently and we'd be ok because fortunately we're not dealing with an actual patient that could die. I'm saying if you do the right things for any school, for any child, you just do the right things and I'll be ok. And the right things are simple; they started with very simple things that this school needed to address. It will get harder as the performance improves (Male Principal, Rural School).

Project 3 Interview Data

Different school performance metrics have varying impacts

Classification Scheme/ School Variable	Ministry Class		API Class		30% Class	
	P-value	Eta2	P-value	Eta2	P-value	Eta2
1) Mean 11+ Score 2001-2004	0.000	0.202	0.000	0.442	0.000	0.189
2) Free Lunch SES Proxy	0.000	0.048	0.000	0.081	0.000	0.053
3) Teacher/ Student Ratio	0.000	0.074	0.000	0.055	0.000	0.064
4) Tenure	0.063	0.012	0.001	0.028	0.899	0.001
5) Undergraduate degrees	0.860	0.001	0.617	0.002	0.809	0.002
6) Add. Basic Academic Qualifications	0.523	0.003	0.161	0.008	0.955	0.001
7) First Year University (Prof training)	0.739	0.001	0.495	0.003	0.099	0.015
8) Basic Professional Training	0.057	0.012	0.000	0.037	0.973	0.001
9) Percentage Female Teachers	0.000	0.030	0.000	0.050	0.017	0.021
10) Weighted Teacher Quality Index	0.072	0.011	0.001	0.031	0.873	0.002
11) Current Enrolment 2004/2005	0.000	0.052	0.000	0.090	0.000	0.146
12) Average Percent < 30% s 2007-2009	0.000	0.303	0.000	0.327	0.000	0.274



Lessons Learnt

- High quality national assessment data and performance metrics such as the API are necessary to track internally the performance of the system. They supplement the credible evidence from international assessments.
- Effective educational policy requires that policymakers use the data to provide greater integrated support for "struggling" schools.
- The role of high quality University Research Centres are essential in providing data and information to catalyze and sustain successful education reform and to build collective capacity.

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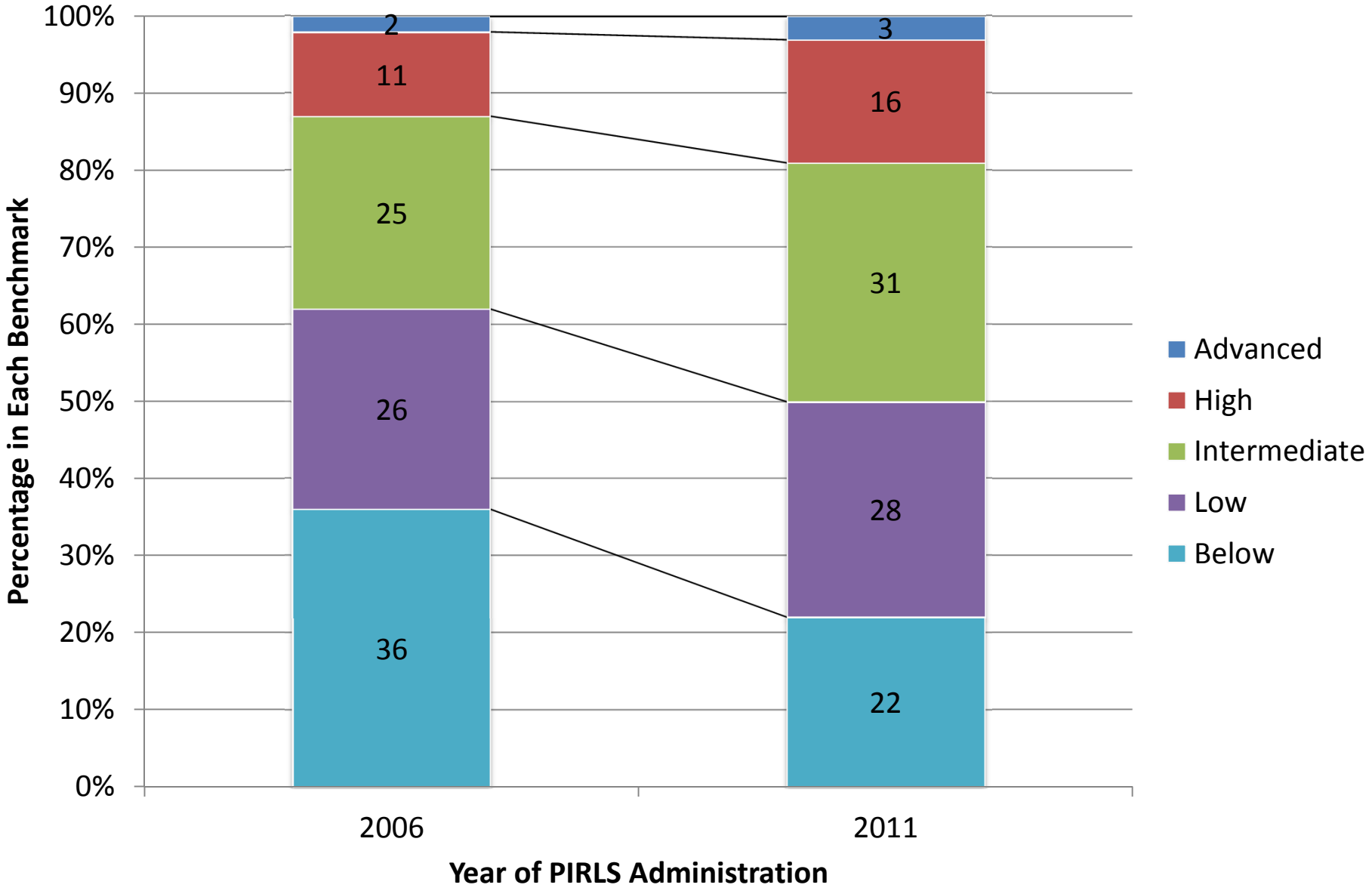
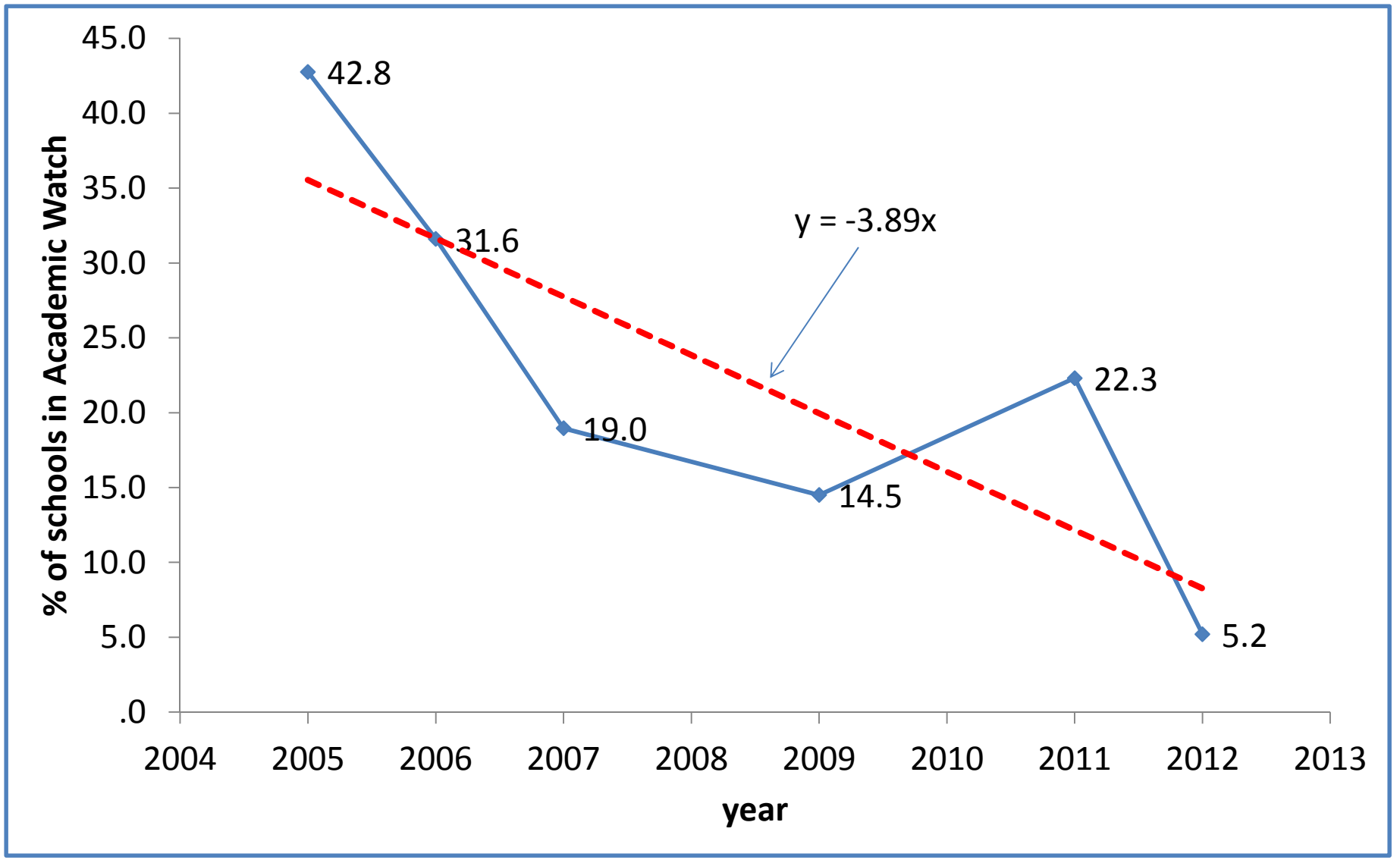
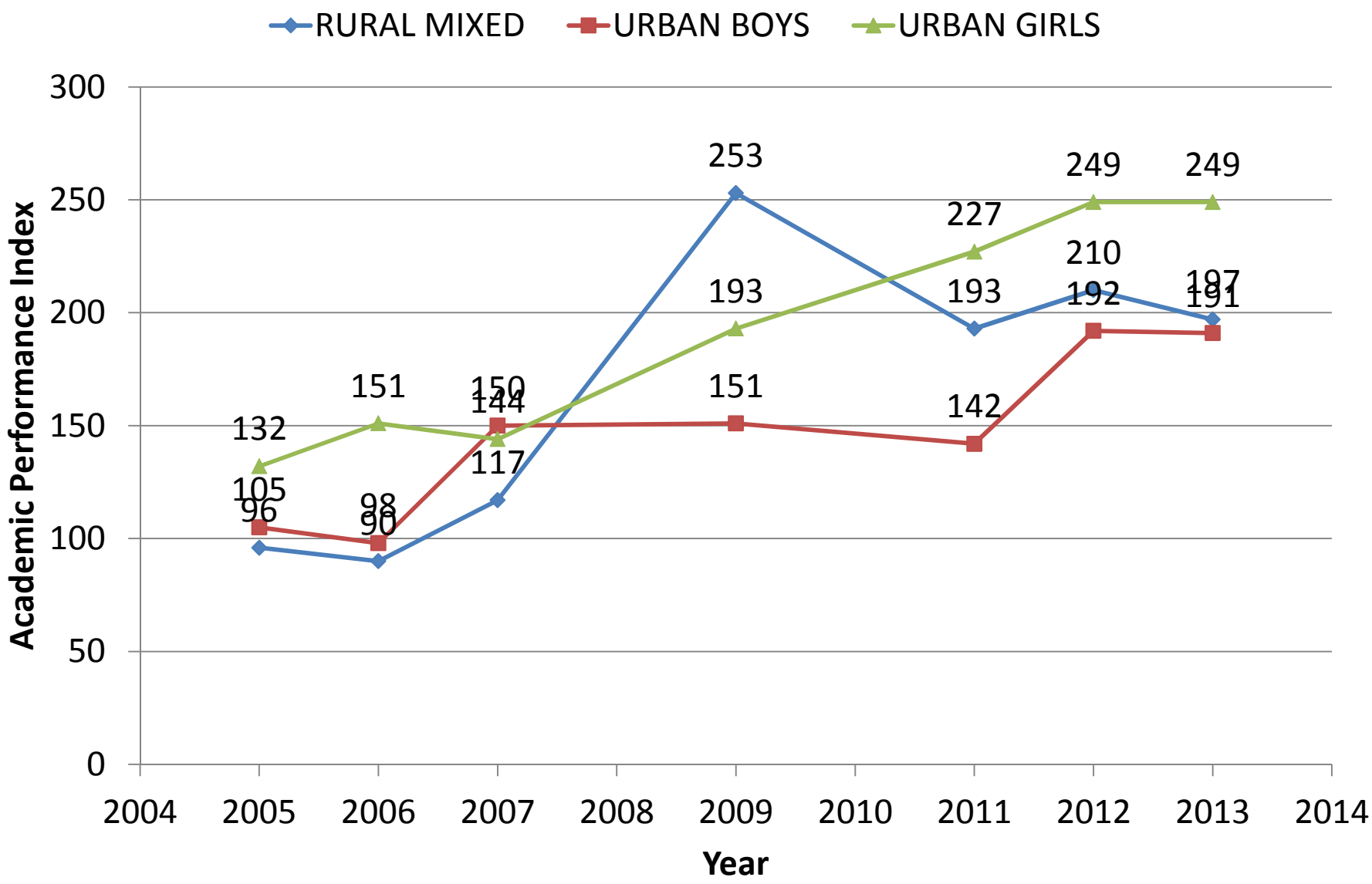


Trinidad & Tobago's improvement on PIRLS



Changes in Numbers of Schools under Academic Watch



API Changes in Schools Under Study


Thank You
WELCOME
Students
DICTIONARY