

3412

Dr. V. Reddy

HSRC conference

and 10 year democracy
Presentation

SUPPLY TO THE R&D SYSTEM

BROADENING THE BASE

- Paper will report on work we have conducted to look quality with respect to science and math at a SCHOOL level.
- Outline the challenges.
- Present different analyses.
- Provide prospects for next 10 years.



Project Participants

- HSRC Researchers

Likani Lebani

Bobby Berkowitz

Lolita Meintjies

- Advisors

Prof Servaas van der Berg (Stellenbosch)

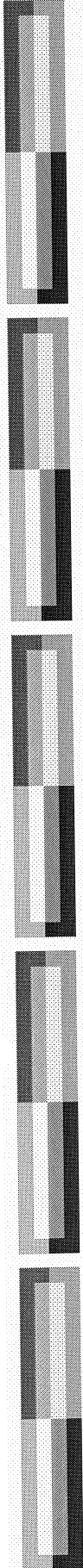
Prof Keith Lewin (Sussex)

Prof Michael Kahn (HSRC)



What is the Project?

- Concerns about state of science and math education in South Africa is well documented.
- To improve the S&T system need to look at the base (i.e. schools).
- Very few learners graduating from the school system with high quality passes in math and sciences.
- Much of the analysis is in terms of *learners*.
- This research focuses on school (*the institution*) as the unit of analysis.




RESEARCH QUESTION

Focus on changes in mathematics
between 1998 and 2003.

- How has participation changed?
 - How has performance changed?
 - How has quality changed?
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RESEARCH APPROACH

- Secondary data analysis of matrix data.
 - Data is disaggregated by ex-department and poverty ranking.
 - Provincial case studies are written.
 - Issues illustrated with Gauteng data.
 - Framework of participation, performance and quality.
 - Definition of quality: eligibility to tertiary.
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PARTICIPATION

	1998	2001	2003
Matriculants	82088	68002	71310
Math entrants	45705	41957	42730
% Math students	55.7	61.7	59.9
DET Math entrants	20272	17582	18549

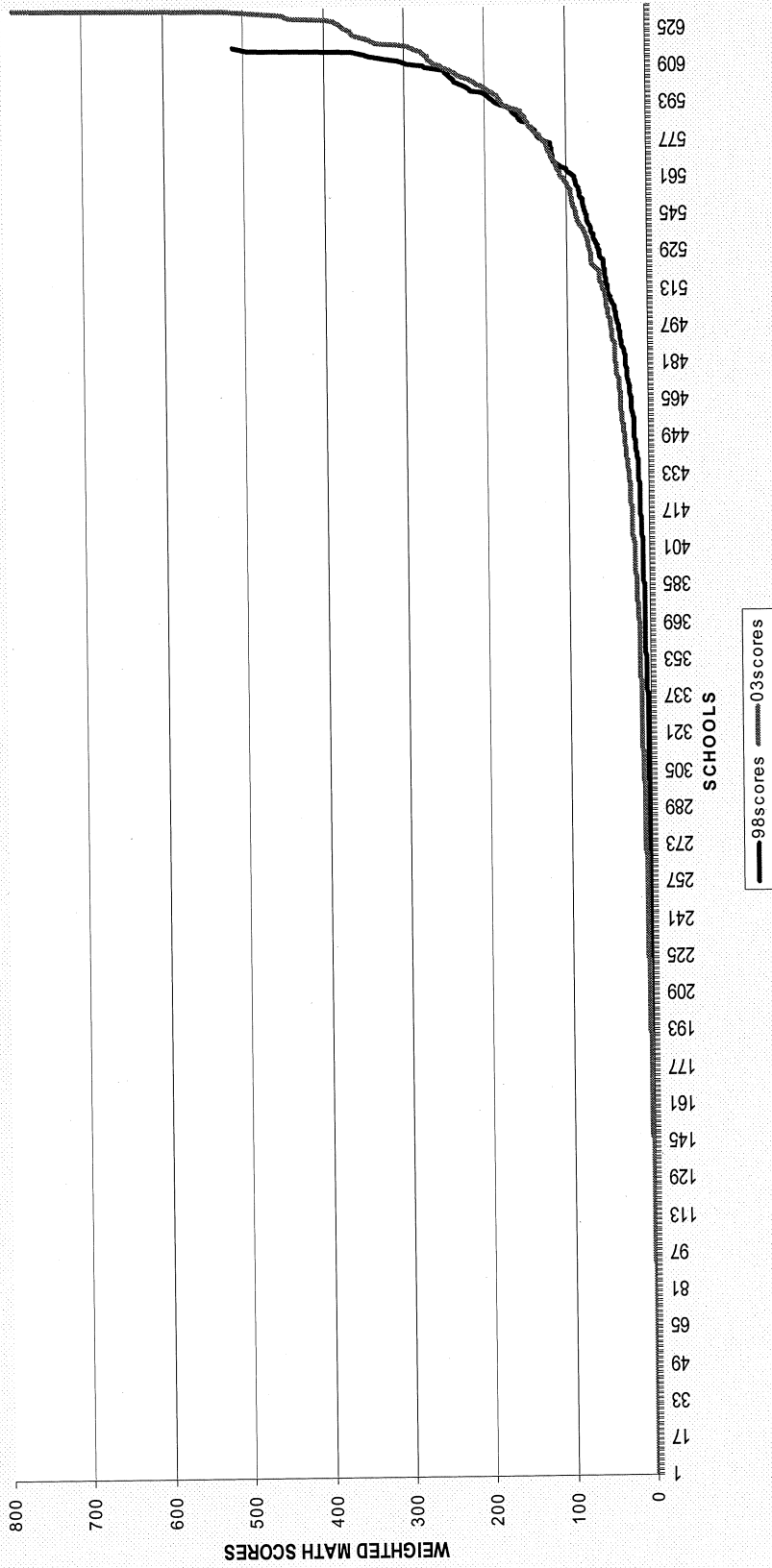
HG PARTICIPATION

	1998	2001	2003
Total HG entrants	9090	8321	9061
% HG	20	20	21
DET HG entrants	1829	1051	1508
%DET HG	9	6	8
Schools only SG	89	145	109

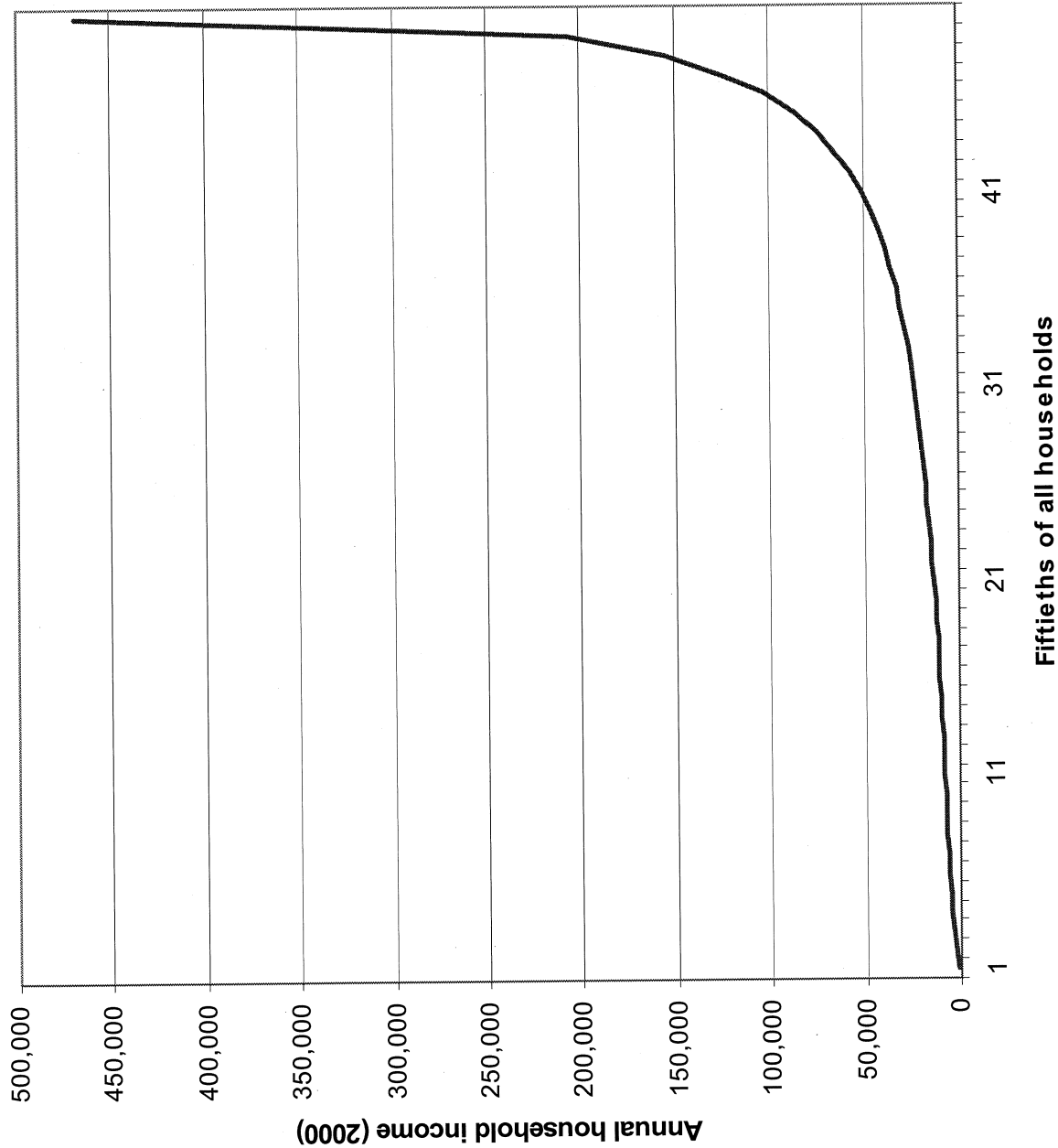
PERFORMANCE

	A	B	C	A+B+C
DET 98	5	9	13	29
DET 01	16	25	55	96
DET 03	49	54	112	215
TED 98	477	528	841	1846
TED 01	747	648	1047	2442
TED 03	1047	758	1040	2845

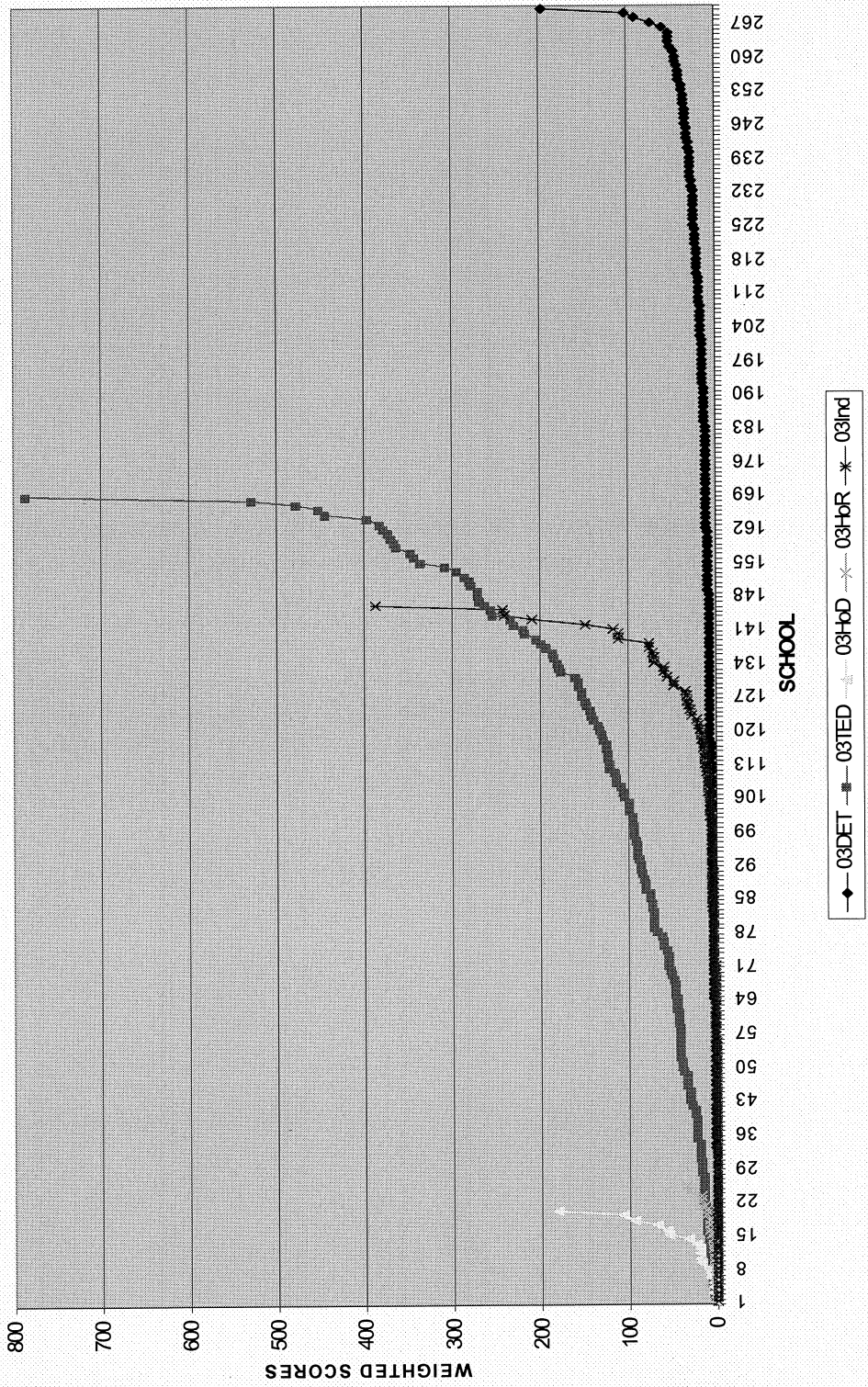
QUALITY IN SCHOOLS



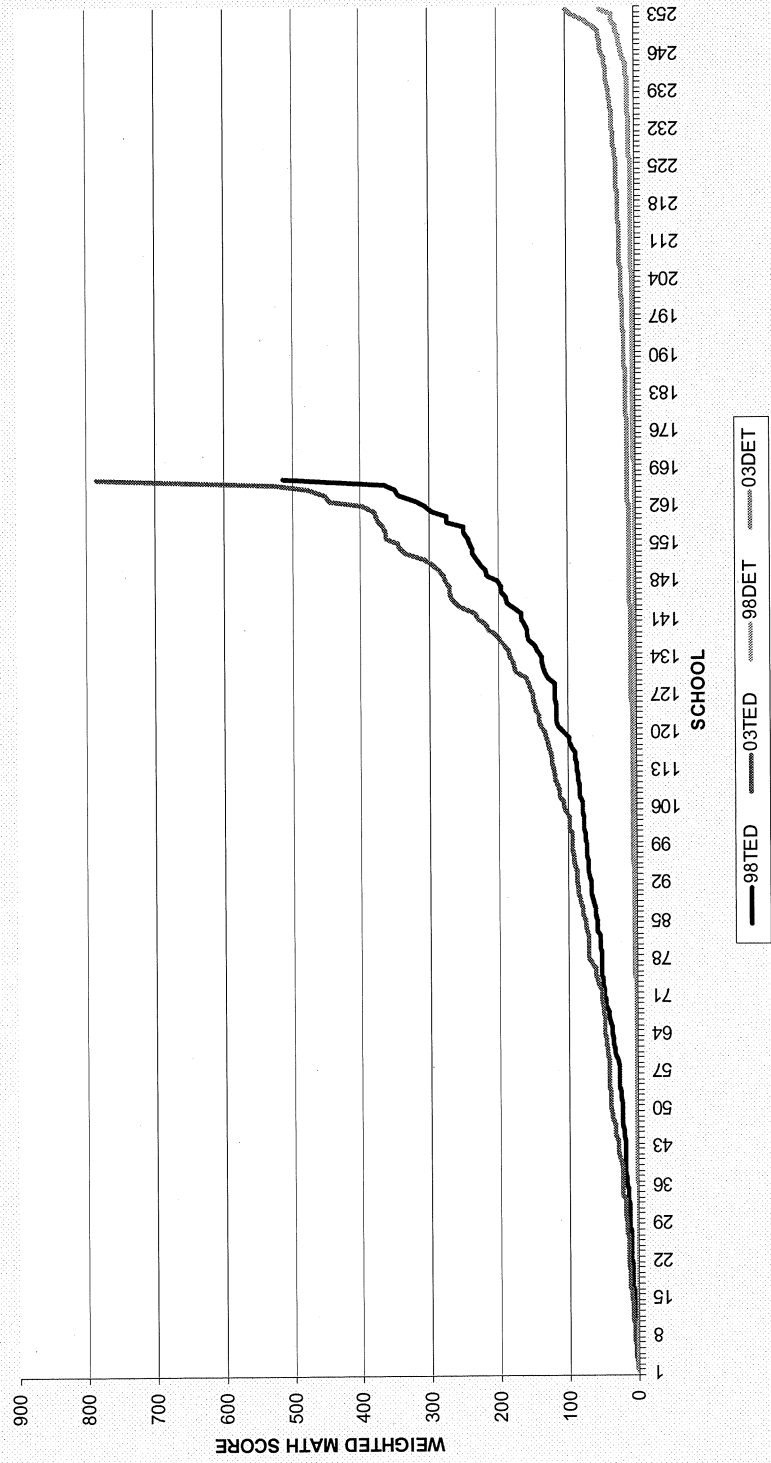
Average income of households



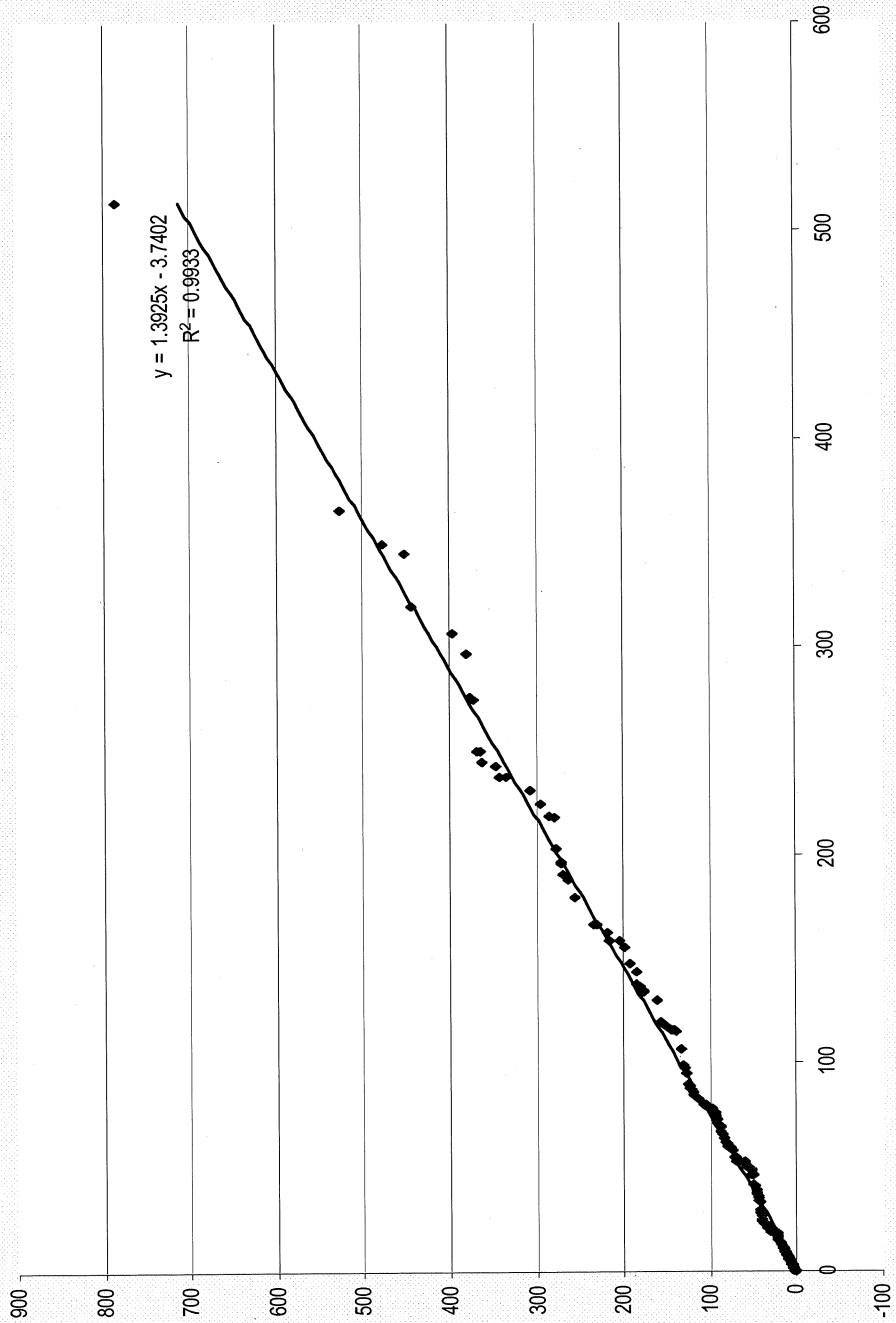
WEIGHTED MATH SCORES FOR 2003 BY EX-DEPARTMENT



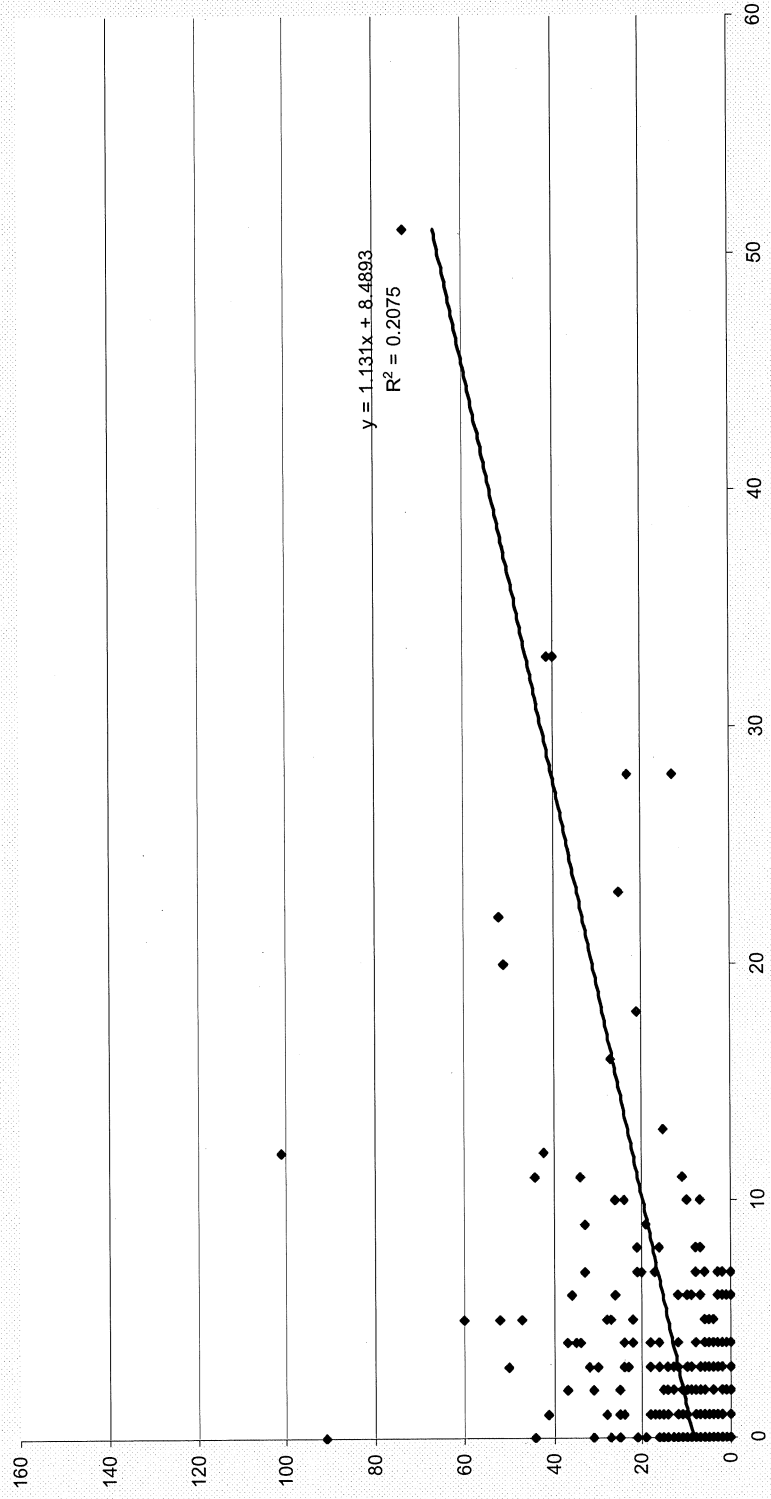
WEIGHTED SCORES FOR 1998 AND 2003 BY EX DEPT



CORRELLATION OF MATH 1998 AND 2003 SCORES IN TED SCHOOLS



CORRELATION BETWEEN 1998 AND 2003 MATH DET SCORES





SO.....

- Overall achievement is improving, but unevenness in school quality.
 - Some schools can be classified as 'good' schools, but many do not have 'enduring quality.'
 - Schools without enduring quality may be due to both in-school and out-of-school (contextual) factors.
 - Where and how does one intervene to improve quality?
 - There needs to be whole school improvement for a sustained period while the surrounding conditions are also improved.
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