

QUALITY LEARNING PROJECT

Summative Evaluation

Presentation to the Steering Committee

14 June 2005

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Assessment Technology & Education Evaluation

ATEE



Outline of Presentation

- Purpose and Outline of report
- Methodology & Design
- Results - Causal modelling

Focus of Summative Report



In Phase 1 (baseline evaluation – 2000):

- **What was the situation in district offices and schools with reference to the five key outcomes stipulated for the QLP?**

In Phase 2 (mid-term evaluation – 2002) and Phase 3 (summative evaluation – 2004):

- **What changes had taken place since the interventions began?**
- **What was the effect of these changes on practice at the district, school, and classroom level?**
- **To what extent can these changes be attributed to the interventions?**

Key Outcomes

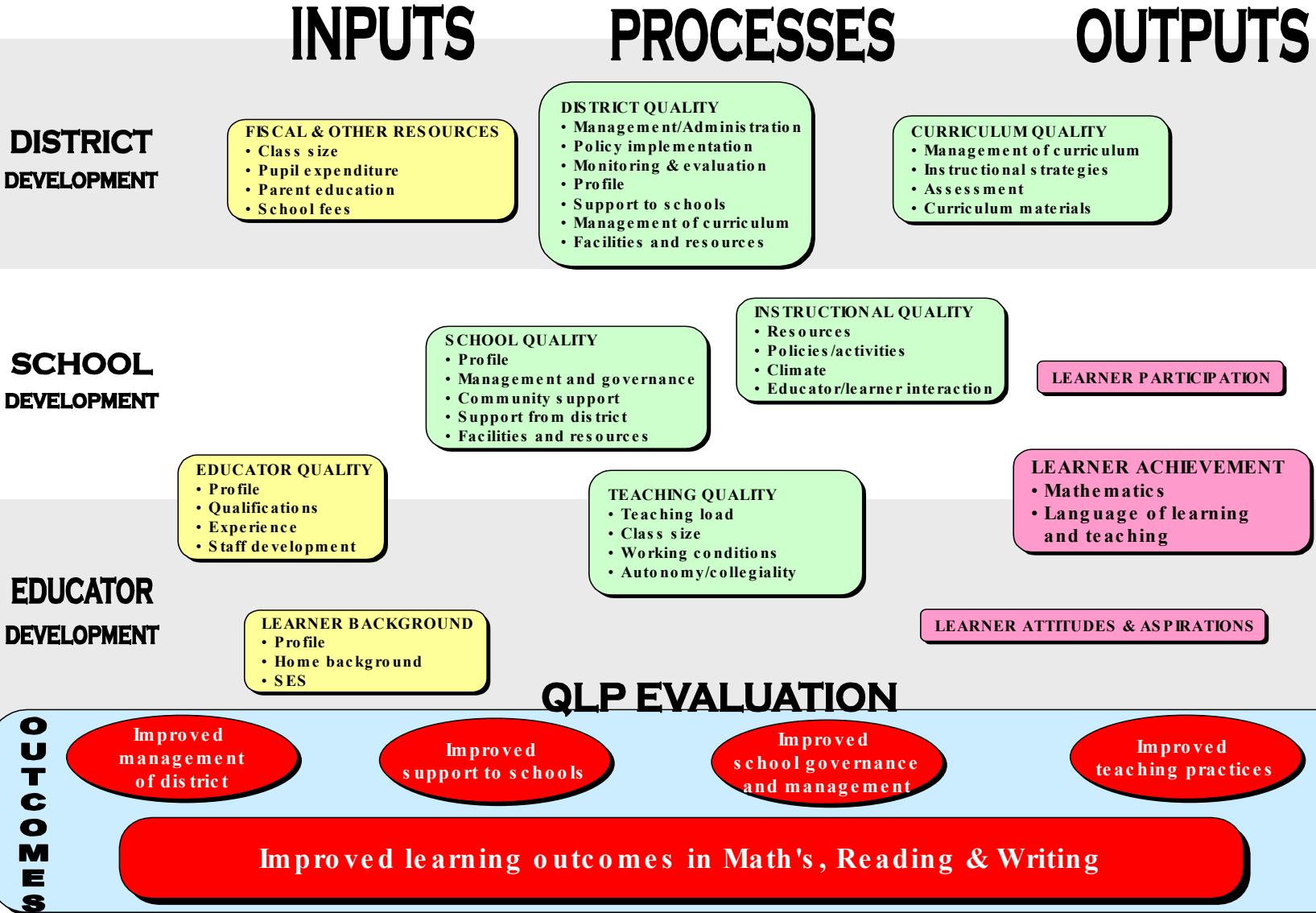


“Each provincial cohort of the QLP schools would, by the end of 2004, show an improvement in school performance measured by overall learner performance with special emphasis on:

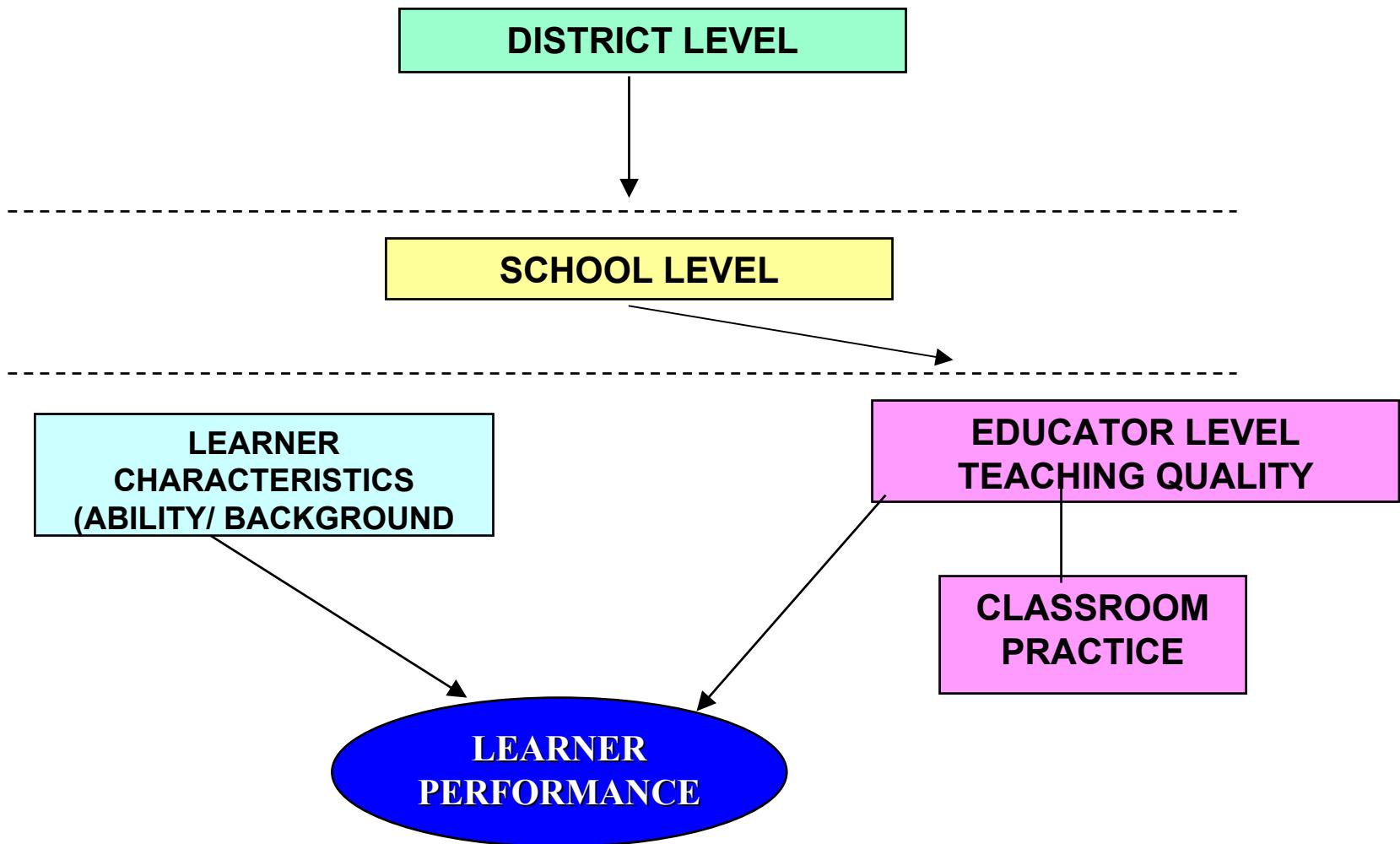
- a 10% improvement in mean overall Matric pass rate;**
- a 10% improvement in mean mathematics pass rate;**
- and**
- a 10% improvement in mean English Second Language pass rate,**

against a comparable sample drawn for the province.”
(Cited from original JET/QLP working documents.)

1999 Evaluation Model (HSRC)



QLP Theoretical Model



Outcomes for the QLP model

DISTRICT LEVEL

- More effective OD, planning and management
- More effective HR management
- More effective financial management
- More effective school monitoring
- More effective support to schools

SCHOOL LEVEL

- More effective school development planning
- Improved school governance
- More effective HR management
- More effective curriculum management
- More effective school administration

EDUCATOR LEVEL

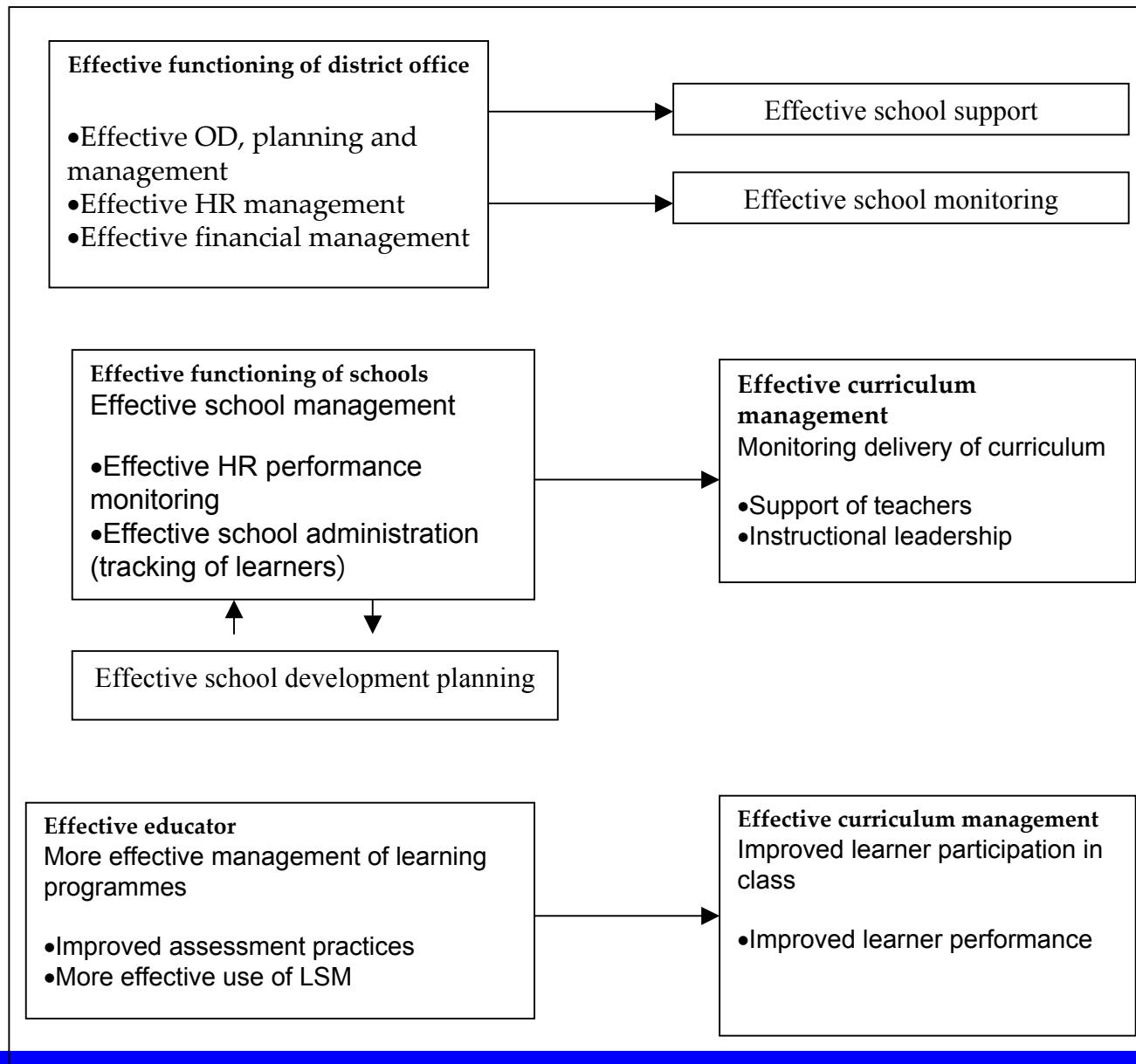
- More effective management and delivery of learning
- Improved assessment practices
- More effective use of LSMS
- Improved learner participation

LEARNER LEVEL

- Improved learner scores



Figure 2.2: The QLP Model at the District, School and Educator Level



Relationship between Survey and Case Study Samples

2000 QLP Schools – 524

Assessment
Surveys 102
schools

Site
Visits
36
schools

21 to 17 districts

2002/4
QLP Schools – 524

Assessment, Surveys + Site Visits

- 70 (>66) experimental schools
- 16 (>14) control schools

17 districts

Mean Scores Schools: 2004 Monitored and Not Monitored



Subject/Grade	Monitored		Not Monitored	
	N	Mean	N	Mean
Maths Grade 11	900	20.89	1532	22.29
Maths Grade 09	816	25.78	1550	25.41
Reading & Writing Grade 11	986	38.43	1973	35.26
Reading & Writing Grade 09	776	33.76	1508	30.68

Brief overview of analysis challenges

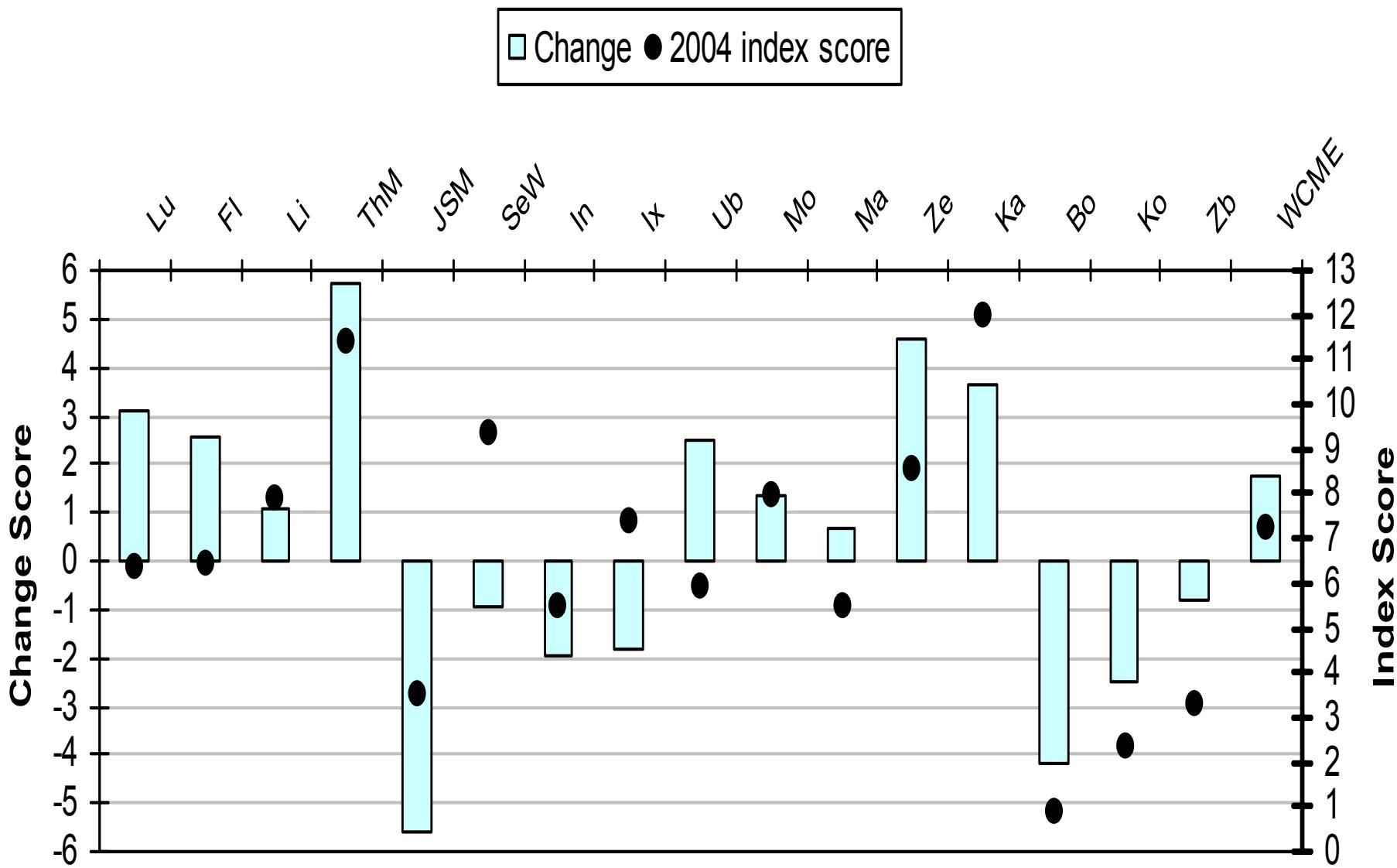


- Instruments changed for 2002 study to reflect the new causal model adopted – insufficient continuity
- School level is lowest for which cases remain consistent (learner data cover different samples in subsequent years)
- Effect – sample rather small, and does not allow inclusion of many variables
- Thus reduced indices to overall levels of functionality, intervention & performance (after checking consistency)

Current Update

- **Drafts, including on modelling, circulated and commented on**
- **Finalising of full report**
- **Next steps: Printed report & dissemination**
- **Media release?**
- **Additional analysis?**

District Functionality

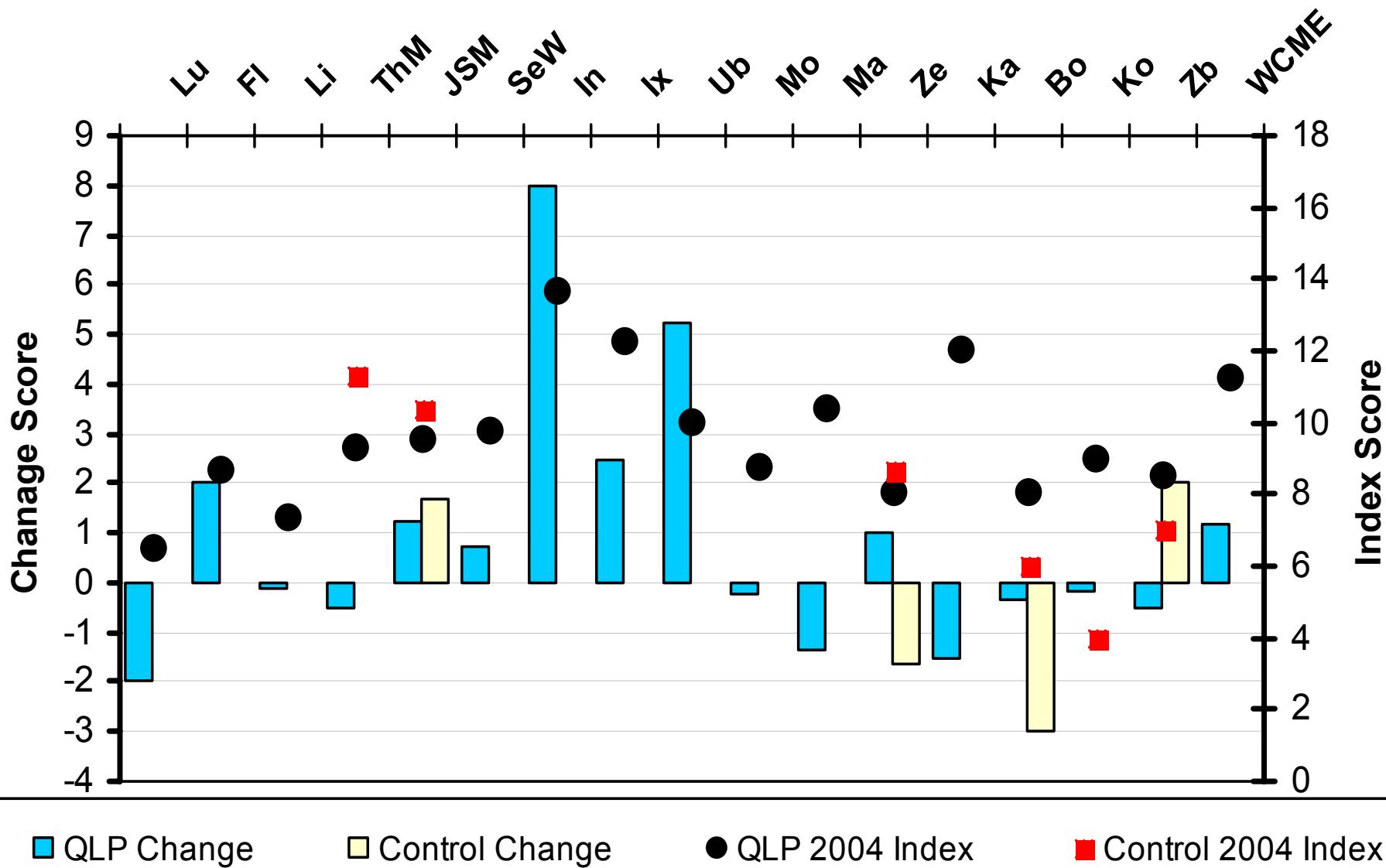


District functionality index scores / trends

LOW (0 - 4)	MODERATE (5 - 8)	HIGH (9 - 13)
Jhb South Mega (9.1) <u>3.5</u> [- -]	Zeerust (3.9) <u>8.5</u> [+ +] Moretele (6.6) <u>8.0</u> [+ +] Libode (6.8) <u>7.9</u> [+ +] Ixopo (9.2) <u>7.4</u> [- -] WC Metro East (5.5) <u>7.2</u> [+ +]	Karoo (8.3) <u>12.0</u> [+ +]
Zebediela (4.1) <u>3.3</u> [- -]	OVERALL (6.0) <u>6.6</u> [+]	Th Mofutsanyana (5.7) <u>11.4</u> [+ +]
Konekwena (4.9) <u>2.4</u> [- -]	Flagstaff (3.9) <u>6.4</u> [+ +] Lusikisiki (3.3) <u>6.3</u> [+ +] Ubombo (3.4) <u>5.9</u> [+ +] Inanda (7.5) <u>5.5</u> [- -] Mafikeng (4.8) <u>5.5</u> [+ +]	Sedibeng-West (10.3) <u>9.4</u> [-]
Bolobedu (5.1) <u>0.9</u> [- -]		

2002 figures in brackets

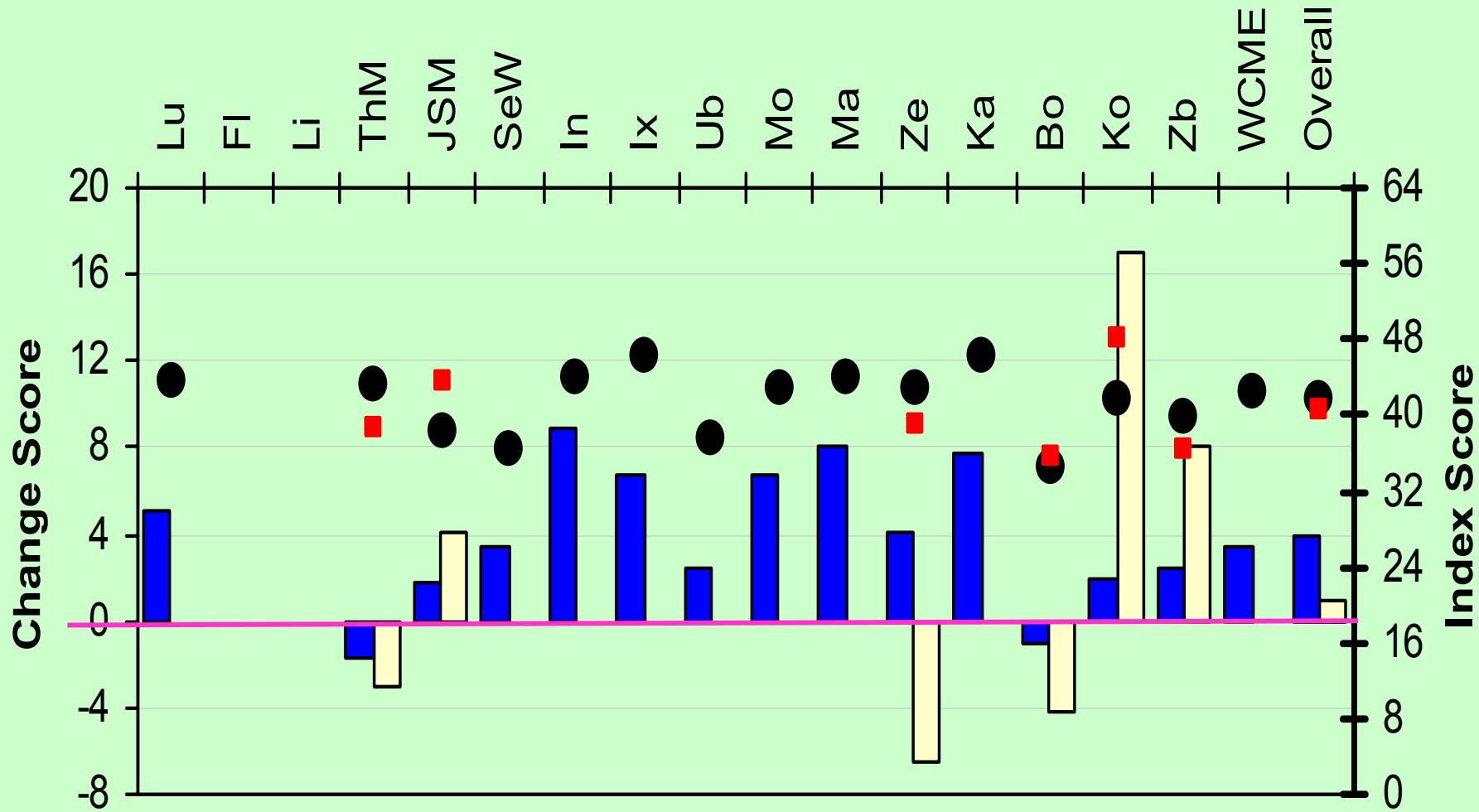
School functioning index by district



School functionality index scores / trends

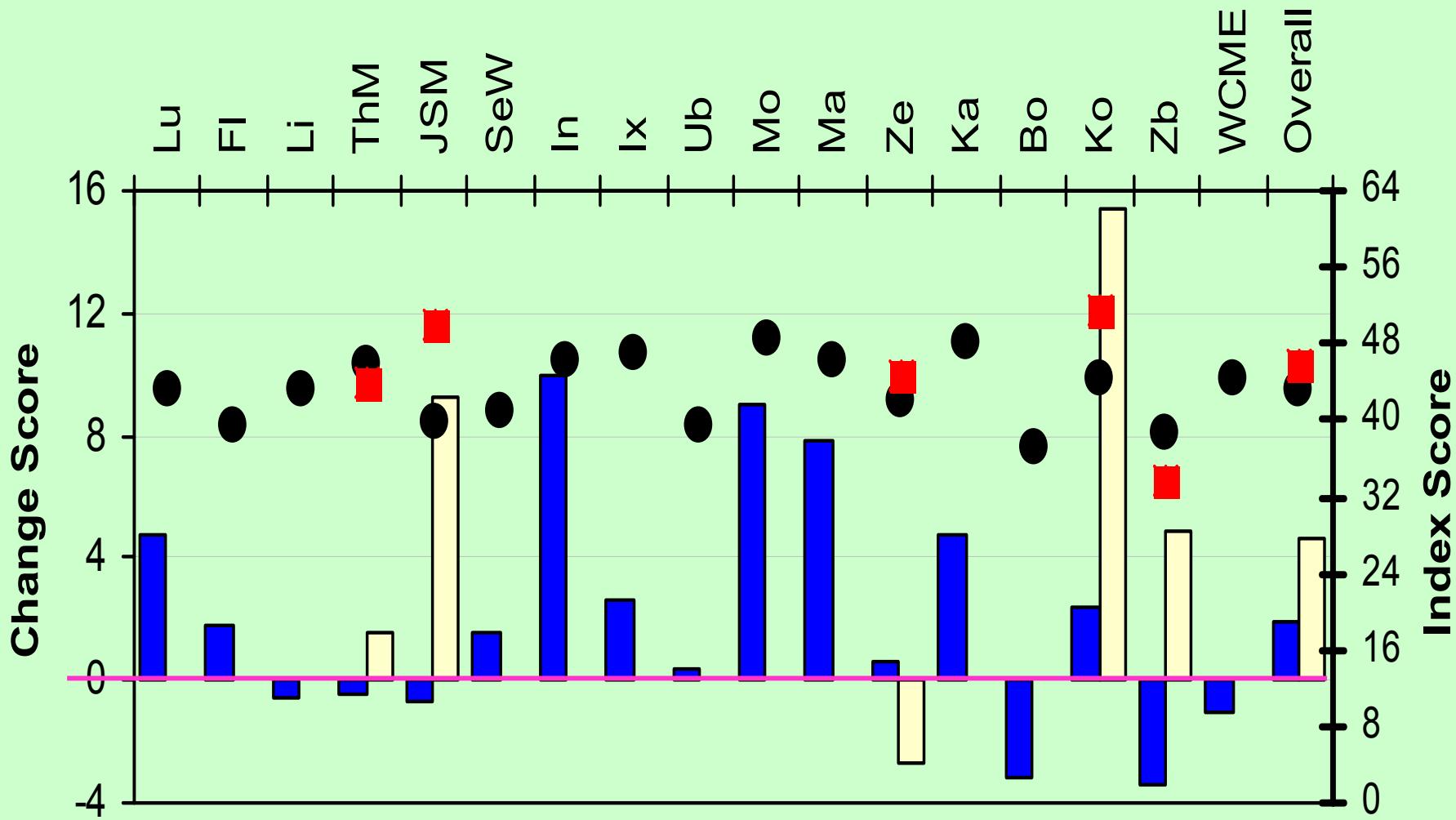
LOW (0 - 6)	MODERATE (7 - 12)	HIGH (13 - 18)
Lusikisiki (8.5) <u>6.5</u> [- -]; {Bolobedu (9.0) <u>6.0</u> [- -]}; {Konekwena (4.0) 4.0 [o]}	Ixopo (9.8) <u>12.3</u> [+ +]; Karoo (13.5) <u>12.0</u> [- -]; {Thabo Mofutsanyana (11.3) <u>11.3</u> [o]}; WC Metro East (10.0) <u>11.2</u> [+ +]; Mafikeng (11.7) <u>10.3</u> [- -]; {Jhb South Mega (8.7) <u>10.3</u> [+ +]}; Ubombo (4.8) <u>10.0</u> [+ +]; Sedibeng-West (9.0) <u>9.8</u> [+]; OVERALL (8.7) <u>9.6</u> [+ +]; Jhb South Mega (8.3) <u>9.5</u> [+ +]; Thabo Mofutsanyana (9.8) <u>9.3</u> [-]; Konekwena (9.2) <u>9.0</u> [o]; {OVERALL (9.1) <u>9.0</u> [o]}; Moretele (9.0) <u>8.8</u> [o]; Flagstaff (6.7) <u>8.7</u> [+ +]; {Zeerust (10.3) <u>8.7</u> [- -]}; Zebediela (9.0) <u>8.5</u> [-]; Zeerust (7.0) <u>8.0</u> [+ +]; Bolobedu (8.3) <u>8.0</u> [o]; Libode (7.4) <u>7.3</u> [o]; {Zebediela (5.0) <u>7.0</u> [+ +]}	Inanda (5.7) <u>13.7</u> [+ +]
2002 figures in brackets		

Grade 9 mathematics classroom functionality



■ QLP Change □ Control Change ● QLP 2004 Index Score ■ Control 2004 Index Score

Grade 11 mathematics classroom functionality



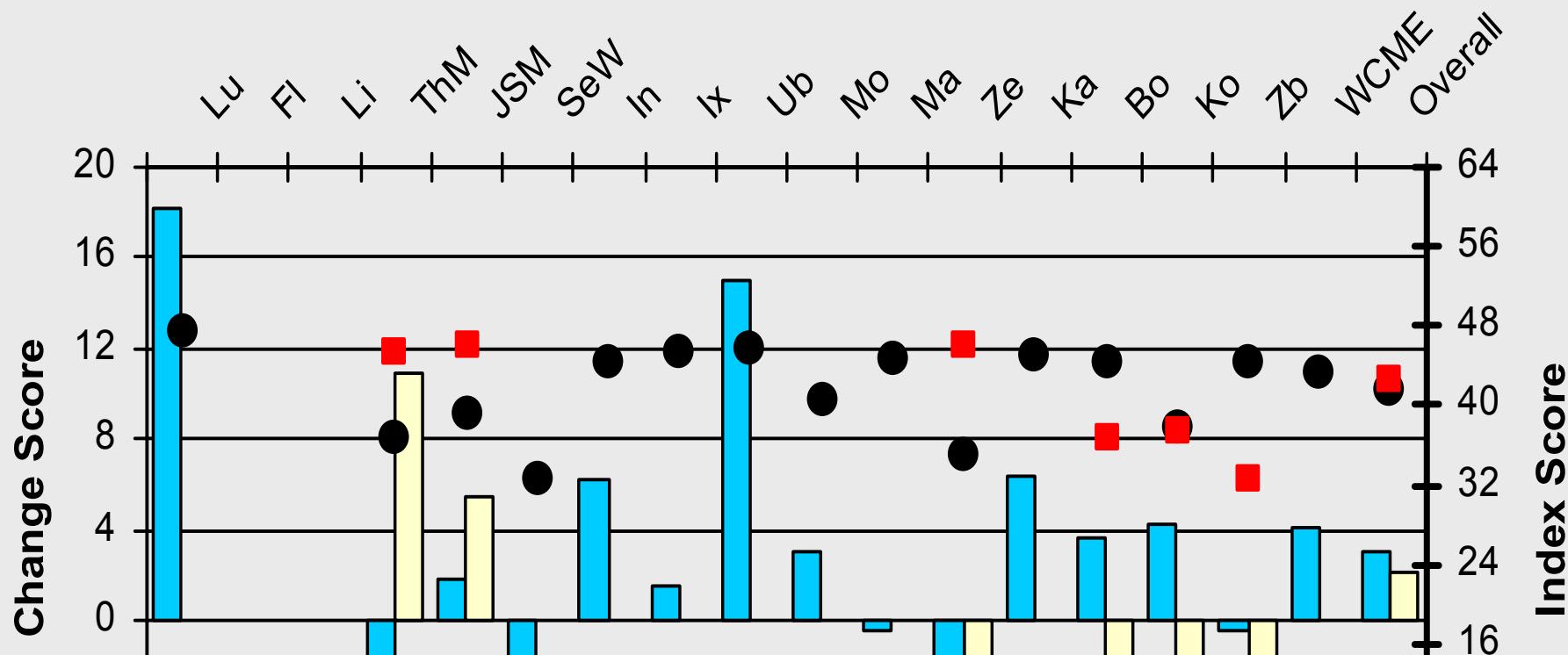
■ QLP Change □ Control Change ● QLP 2004 Index Score ■ Control 2004 Index Score

Summary

- **QLP schools outperformed control schools at Grade 9 level in:** teacher proficiency, lesson pedagogy, assessment, and classwork
- **QLP schools outperformed control schools at Grade 11 level in:** curriculum coverage, classwork, and homework

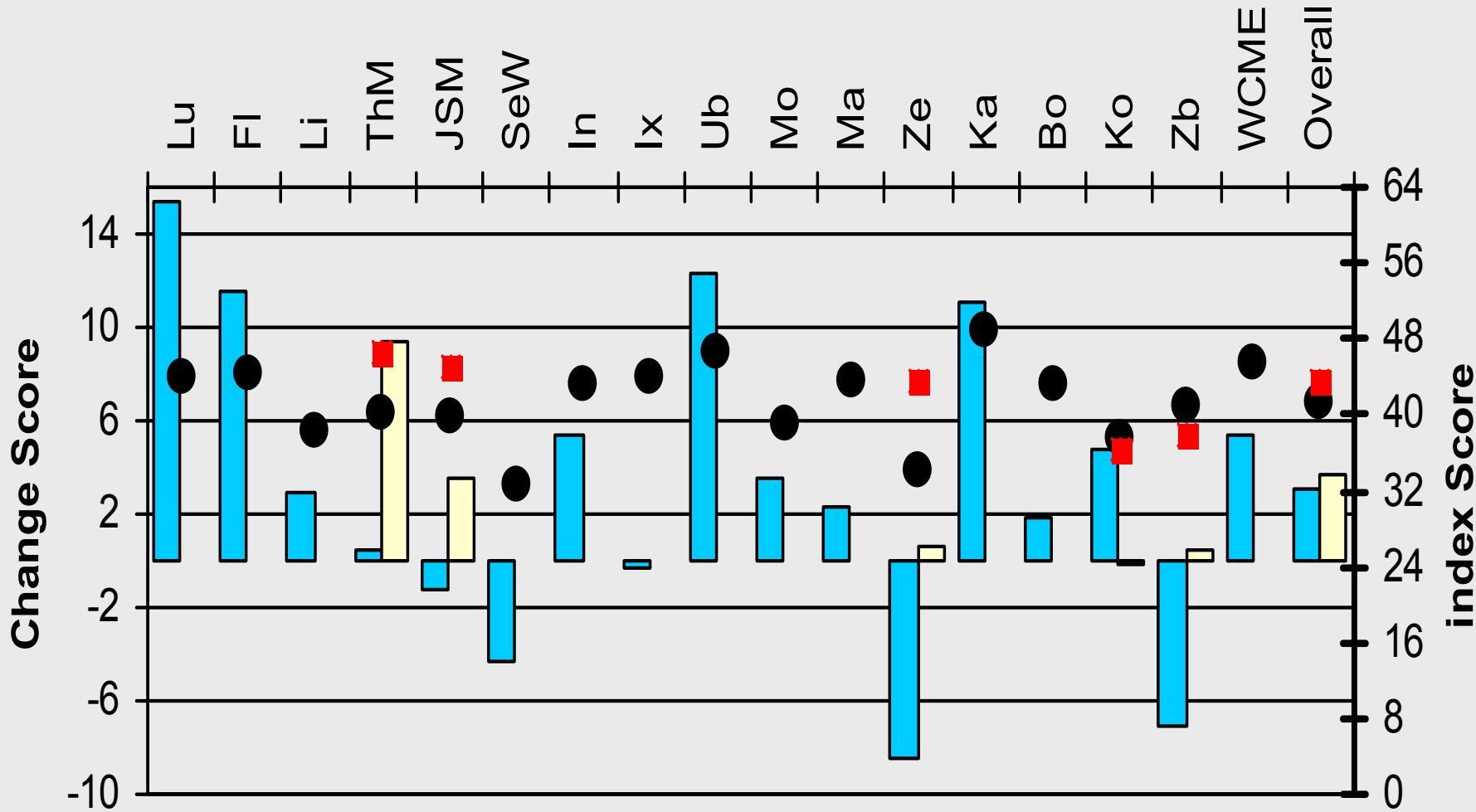


Grade 9 Language classroom functionality



■ QLP Change ■ Control Change ● QLP 2004 Index Score ■ Control 2004 Index Score

Grade 11 Language classroom functionality

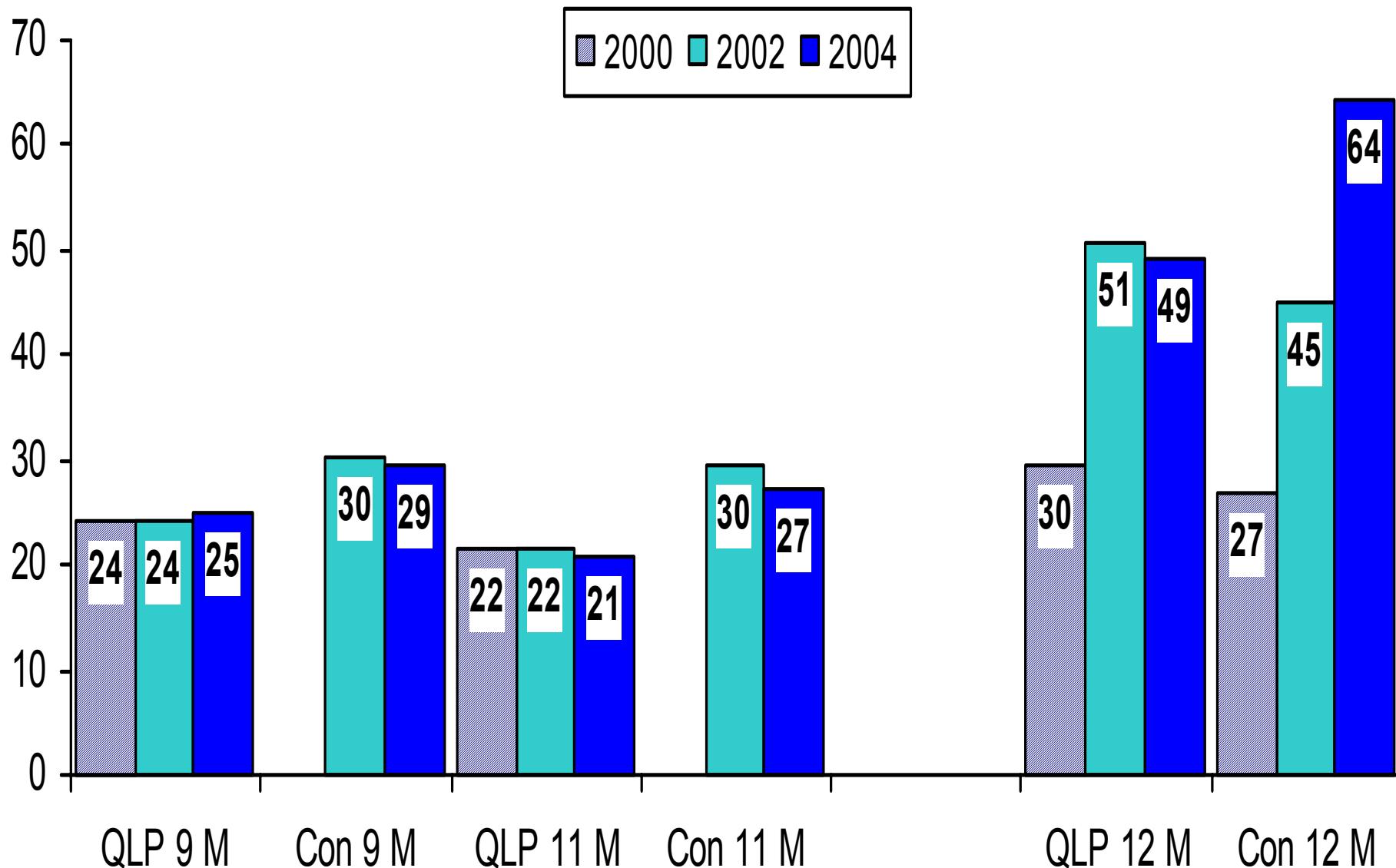


■ QLP Change □ Control Change ● QLP 2004 Index Score ■ Control 2004 Index Score

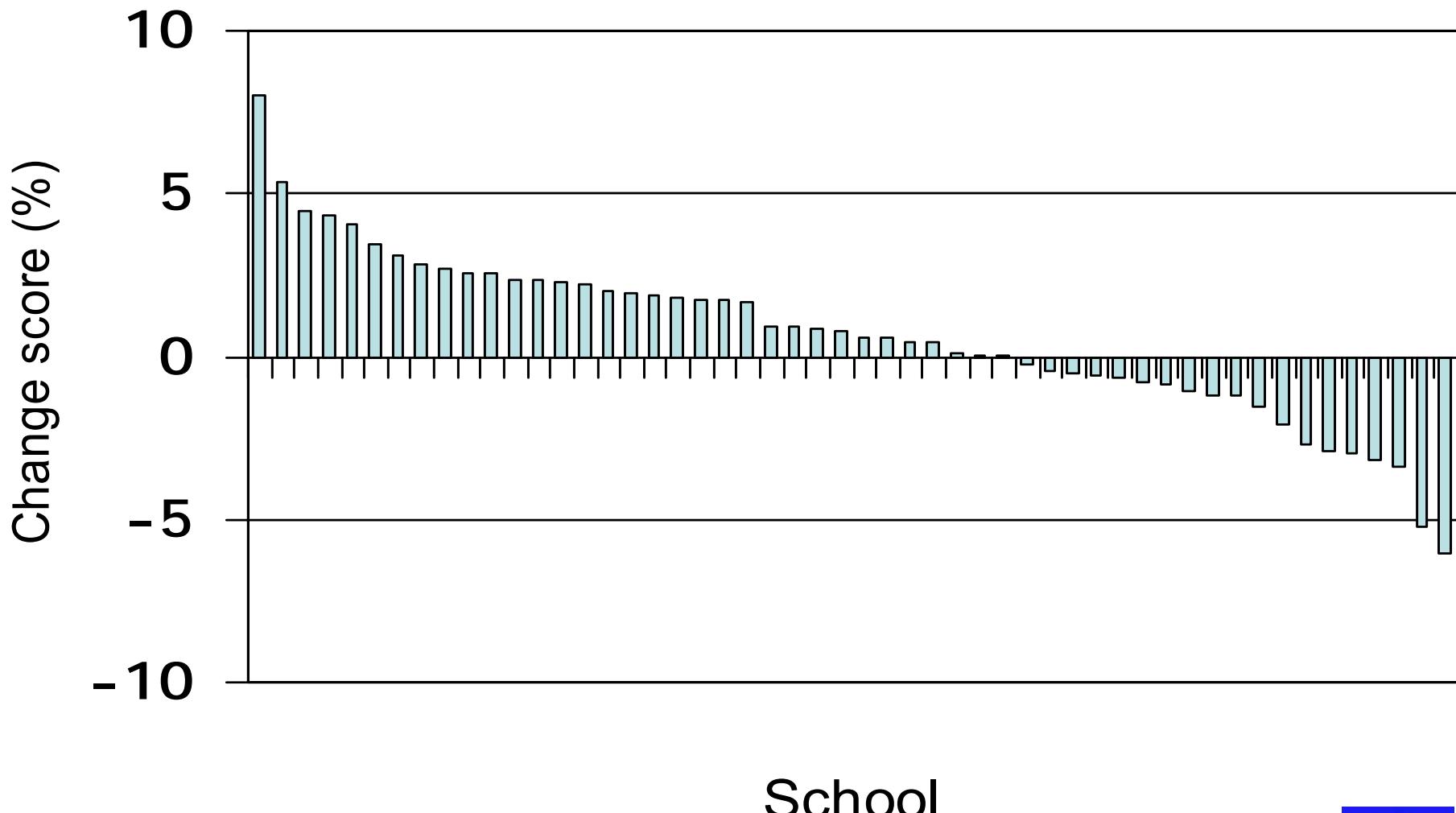
Summary

- **QLP schools outperformed control schools at Grade 9 level in:** teacher proficiency, curriculum coverage, cognitive demand of lesson, lesson pedagogy, and classwork
- **QLP schools outperformed control schools at Grade 11 level in:** curriculum coverage, and classwork
- **Overall teacher/class functioning (by grade & subject):** Maths Gr 9 - QLP outperformed controls (inverse applied for Maths Gr 11); LOLT – QLP and control both improved

Maths scores (%) for QLP and Control schools by Year and Grade



Grade 9 Mathematics % change in scores: 2002 to 2004

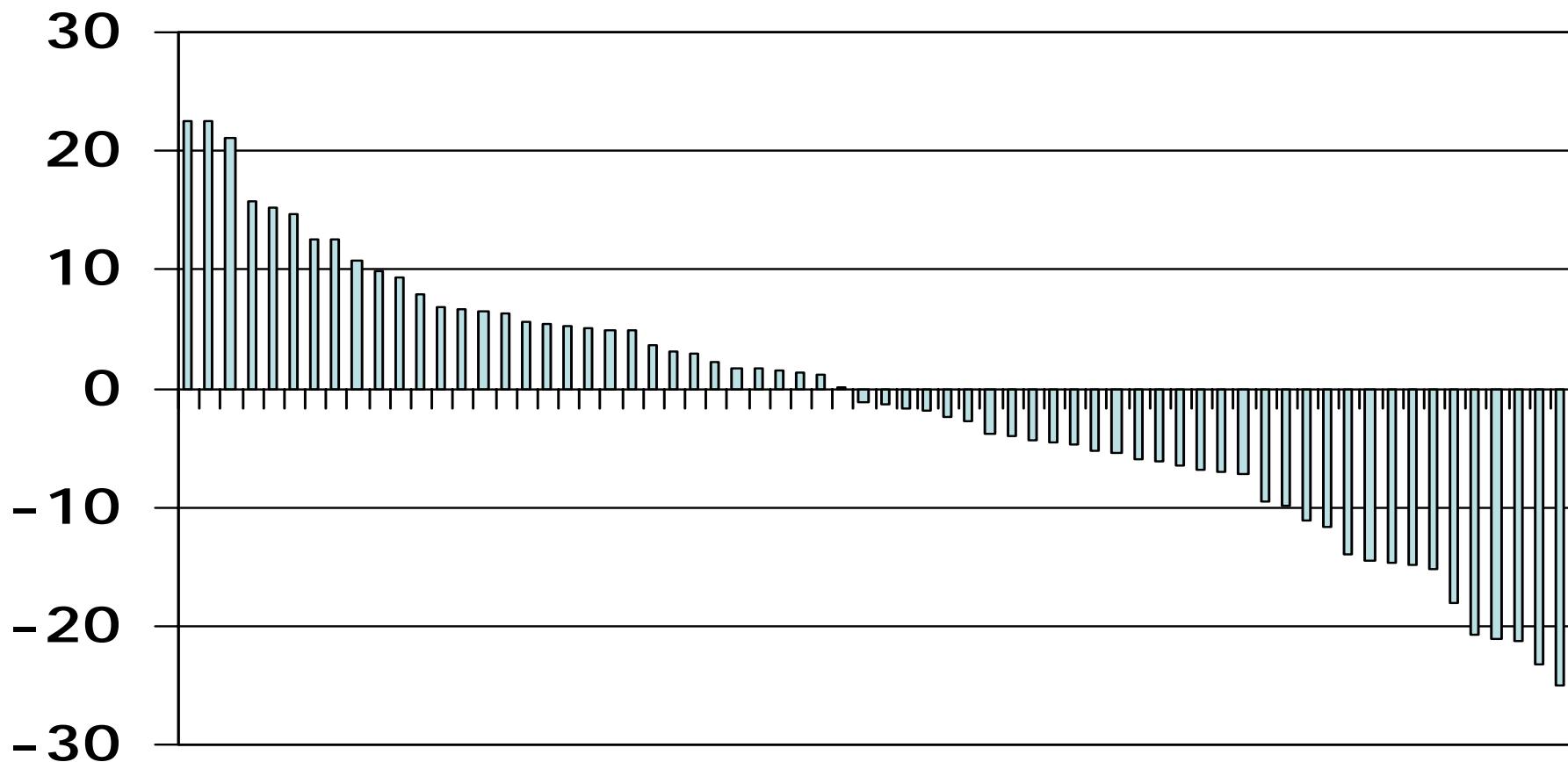


School

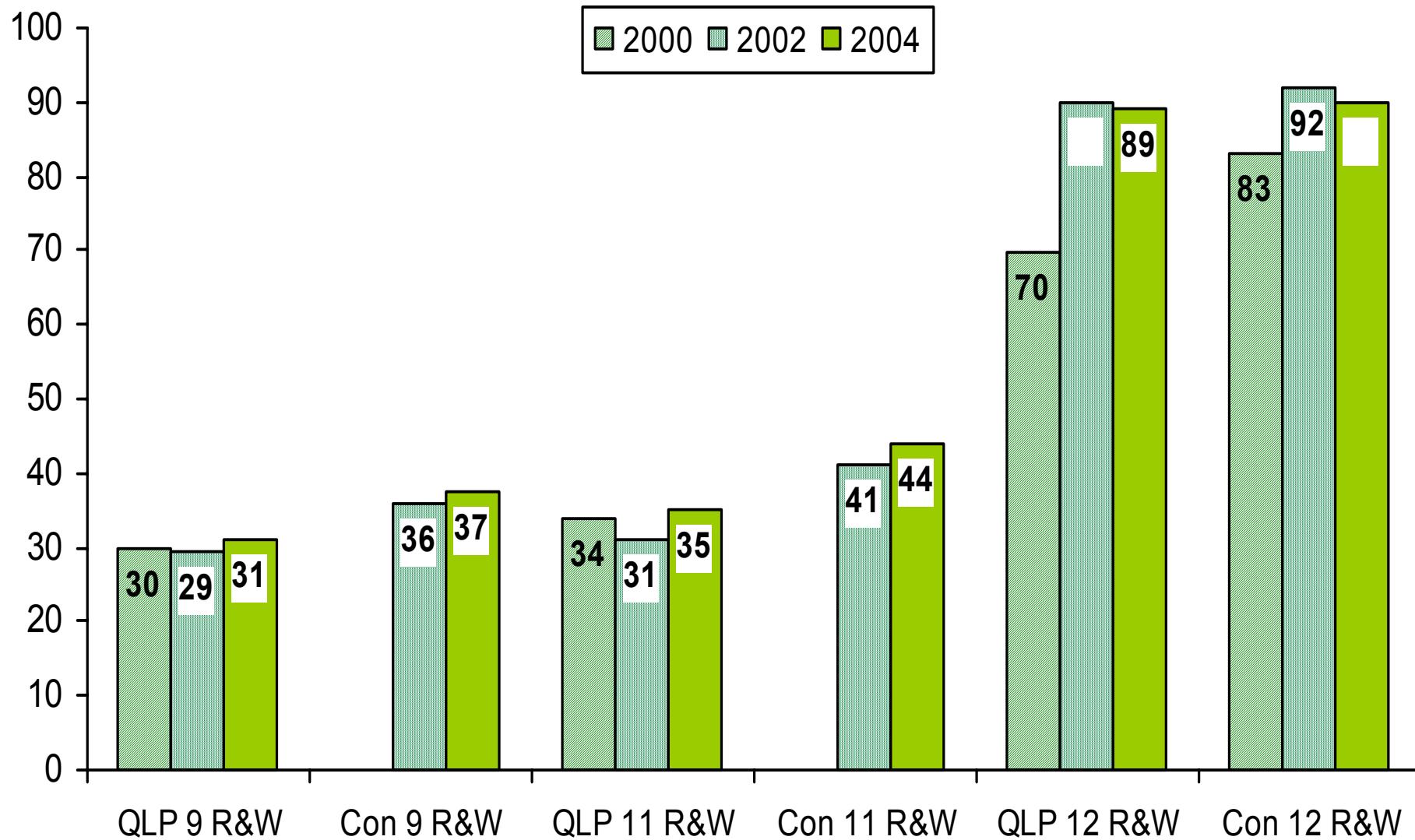
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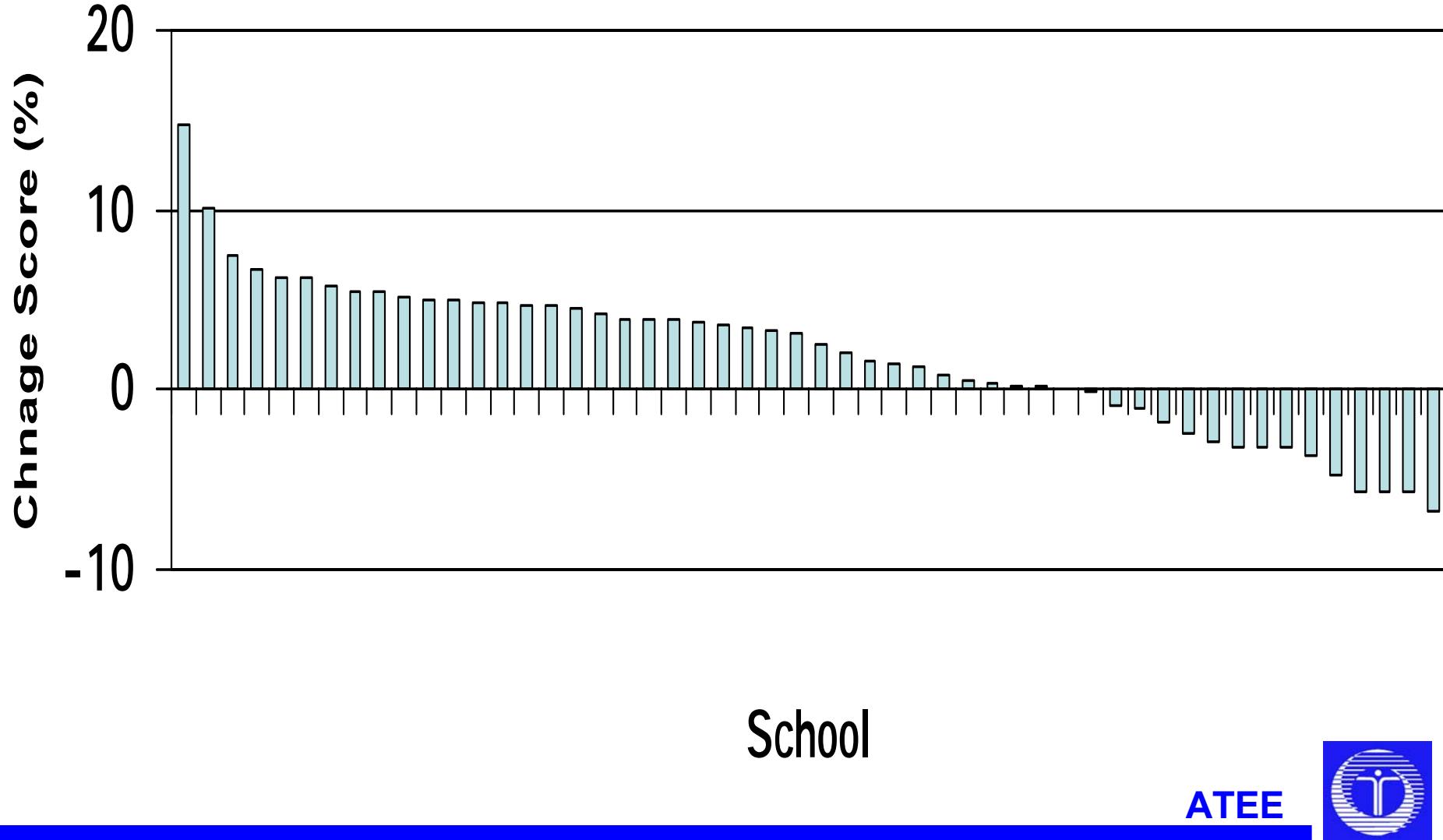
Grade 11 Mathematics % change in scores: 2002 to 2004



Language scores (%) for QLP and Control schools by Year & Grade



Grade 9 Language % change in scores: 2002 to 2004

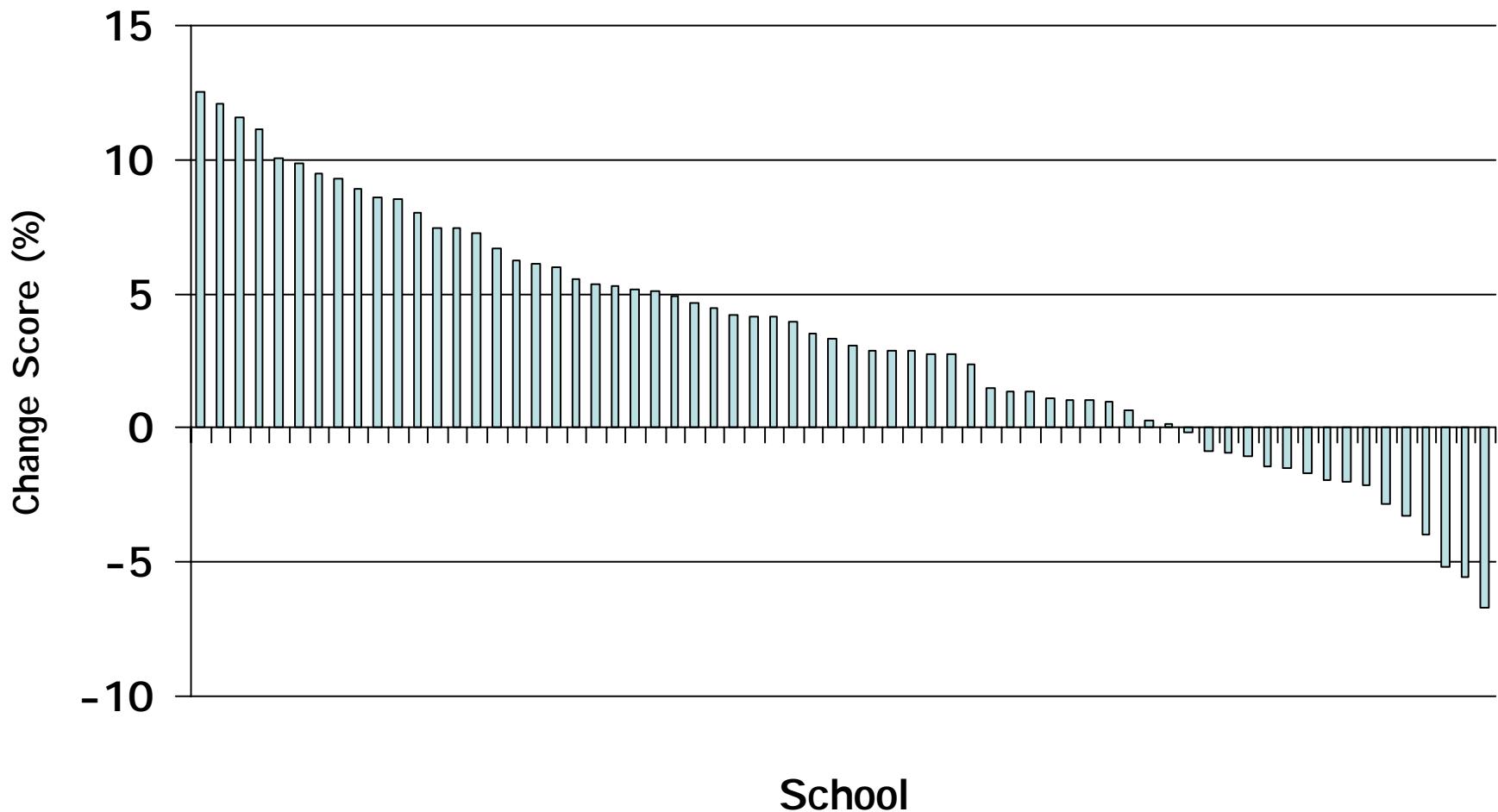


School

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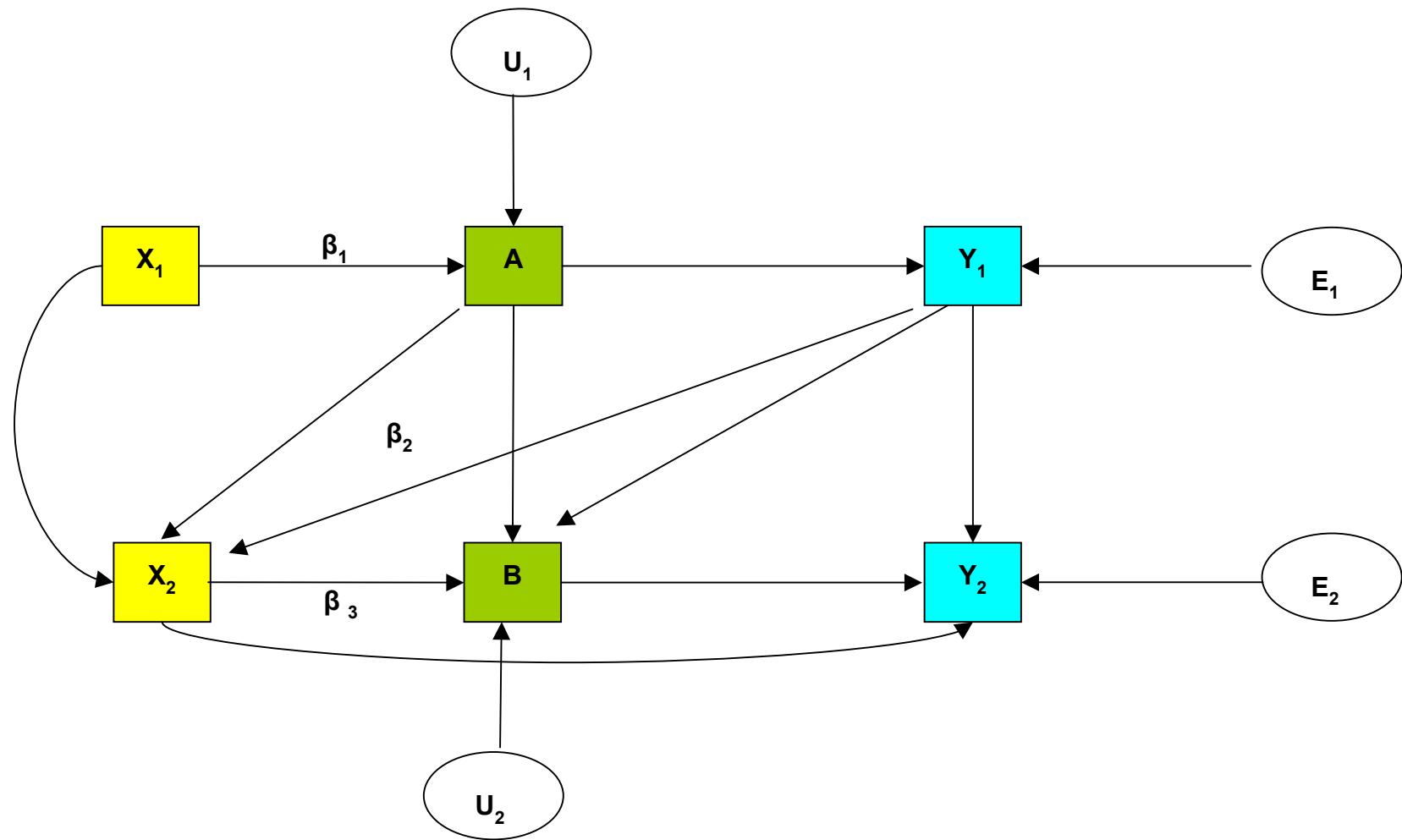
Grade 11 Language % change in scores: 2002 to 2004



Causal model and its elements



Path model applied



Indicators and variables used

■ Six clusters of information:

- **Cluster 1 (X_1) – Interventions mid-2001 to end 2002**
(district, school, maths teachers, language teachers as var.s)
- **Cluster 2 (A) – Initial functionality level at end 2002**
(district, school, classroom) – latter = x 2 subjects x 2 gr.s)
- **Cluster 3 (Y_1) – Learner performance at end 2002**
(Maths Gr9, Maths Gr 11, R&W Gr 9, R&W Gr 11)
- **Cluster 4 (X_2) – Interventions since 2003 to mid-2004**
(district, school, maths teachers, language teachers as var.s)
- **Cluster 5 (B) – Eventual functionality level end 2002**
(district, school, classroom) – latter = x 2 subjects x 2 gr.s)
- **Cluster 6 (Y_2) – Learner performance at end 2004**
(Maths Gr9, Maths Gr 11, R&W Gr 9, R&W Gr 11)



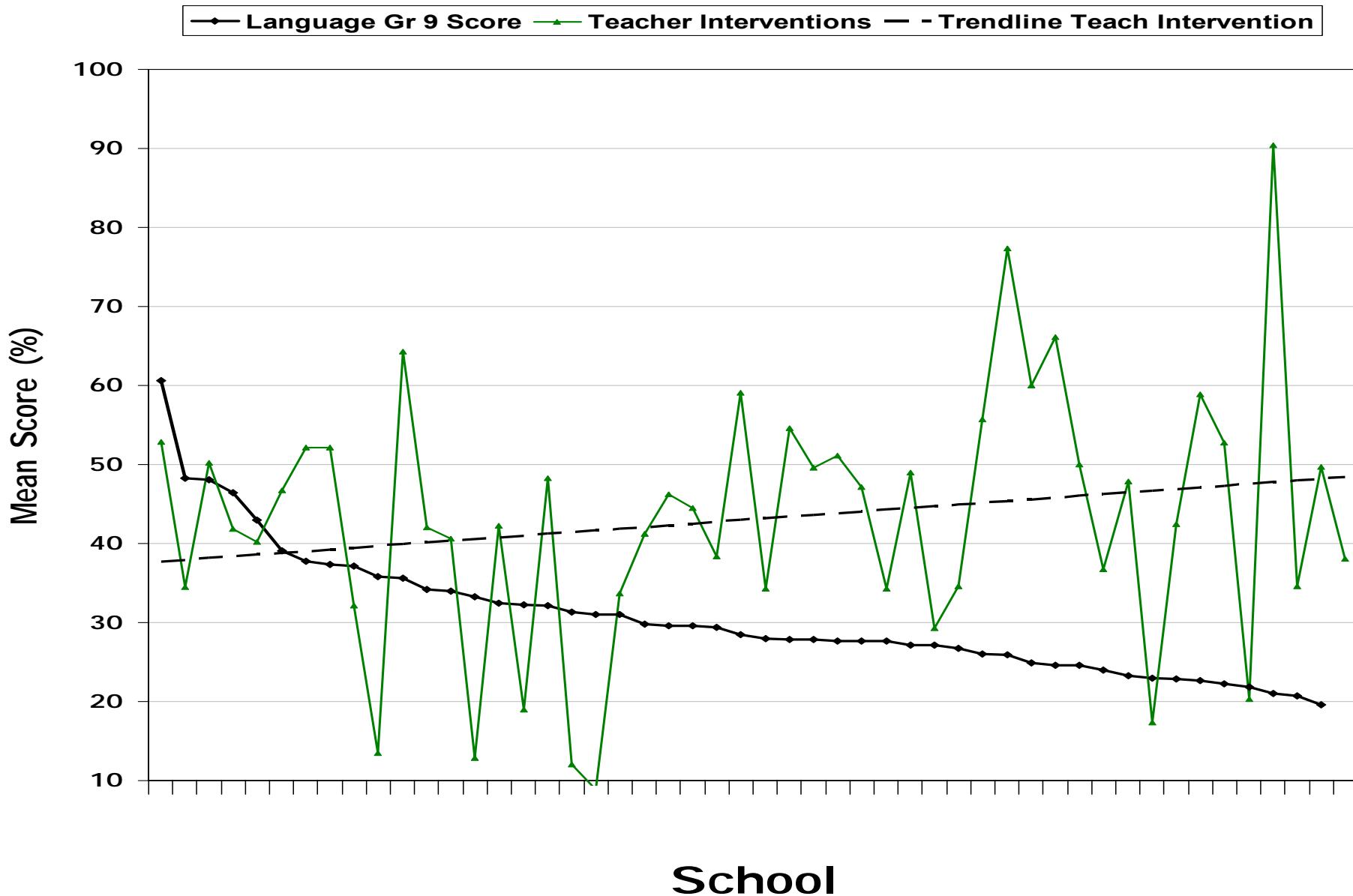
Findings pertaining to Gr 9 Maths

Predicted	←	Variables	P	Regression coefficient	
				Predictor	Standardised
Mths9 Lrnr Perf 2002	2a	Schl Funct 2002	.024	.272	.572
Mths9 Lrnr Perf 2002	2b	Mths9 Tchr Funct 2002	.003	.354	.425
Distr Intrv 2003/4	3a	Distr Intrv 2001/2	***	.504	.826
Distr Intrv 2003/4	3b	Schl Intrv 2001/2	.004	-.260	-.232
Schl Intrv 2003/4	3c	Distr Intrv 2001/2	***	.280	.422
Schl Intrv 2003/4	3d	Schl Intrv 2001/2	***	.395	.326
Schl Intrv 2003/4	3e	Mths Tchr Intrv 2001/2	***	.435	.298
Mths Tchr Intrv 2003/4	3f	Mths Tchr Intrv 2001/2	***	.856	.764
Schl Funct 2004	4a	Mths Tchr Intrv 2003/4	***	.372	.030
Schl Funct 2004	4b	Mths9 Lrnr Perf 2002	***	.524	.260
Schl Funct 2004	4c	Schl Funct 2002	.038	.191	.199
Distr Funct 2004	4d	Distr Funct 2002	***	.309	.424
Mths9 Tchr Funct 2004	4e	Distr Funct 2002	.012	.260	.051
Mths9 Tchr Funct 2004	4f	Mths9 Tchr Funct 2002	***	.406	.371
Mths9 Tchr Funct 2004	4g	Distr Intrv 2001/2	***	-.377	-.093
Mths9 Lrnr Perf 2004	5a	Schl Funct 2004	.028	.139	.240
Mths9 Lrnr Perf 2004	5b	Mths9 Tchr Funct 2004	.010	.132	.149
Mths9 Lrnr Perf 2004	5c	Mths9 Lrnr Perf 2002	***	.794	.680

Findings pertaining to Gr 9 R&W

Predicted	←	Variables	P	Regression coefficient	
		Predictor		Standardised	Unstandardised*
Distr Funct 2002	1a	Lang Tchr Intrv 2001/2	.019	.281	.163
Lang9 Tchr Funct 2002	1b	Distr Intrv 2001/2	.020	-.256	-.080
Lang9 Tchr Funct 2002	1c	Schl Intrv 2001/2	***	-.388	-.067
Lang9 Lrnr Perf 2002	2a	Schl Funct 2002	.009	.298	.940
Lang9 Lrnr Perf 2002	2b	Lang9 Tchr Funct 2002	***	.384	.592
Distr Intrv 2003/4	3a	Lang9 Lrnr Perf 2002	.045	.153	.500
Distr Intrv 2003/4	3b	Distr Intrv 2001/2	***	.547	.867
Distr Intrv 2003/4	3c	Schl Intrv 2001/2	.045	-.204	-.177
Schl Intrv 2003/4	3d	Distr Intrv 2001/2	.006	.206	.307
Schl Intrv 2003/4	3e	Schl Intrv 2001/2	.004	.287	.234
Schl Intrv 2003/4	3f	Lang Tchr Intrv 2001/2	***	.564	.385
Lang Tchr Intrv 2003/4	3g	Lang Tchr Intrv 2001/2	***	.828	.818
Schl Funct 2004	4a	Lang Tchr Intrv 2003/4	***	.321	.022
Schl Funct 2004	4b	Lang9 Lrnr Perf 2002	***	.437	.135
Schl Funct 2004	4c	Schl Funct 2002	.013	.262	.256
Distr Funct 2004	4d	Distr Intrv 2003/4	***	.374	.396
Distr Funct 2004	4e	Schl Funct 2002	.036	.234	2.558
Distr Funct 2004	4f	Distr Funct 2002	.019	.259	.341
Lang9 Tchr Funct 2004	4g	Schl Funct 2002	.026	.274	.509
Lang9 Lrnr Perf 2004	5a	Schl Funct 2004	.026	.141	.422
Lang9 Lrnr Perf 2004	5b	Lang Tchr Intrv 2003/4	.052	-.105	-.022
Lang9 Lrnr Perf 2004	5c	Lang9 Lrnr Perf 2002	***	.830	.768

Effect of teacher interventions on L09 Performance (No Modification)



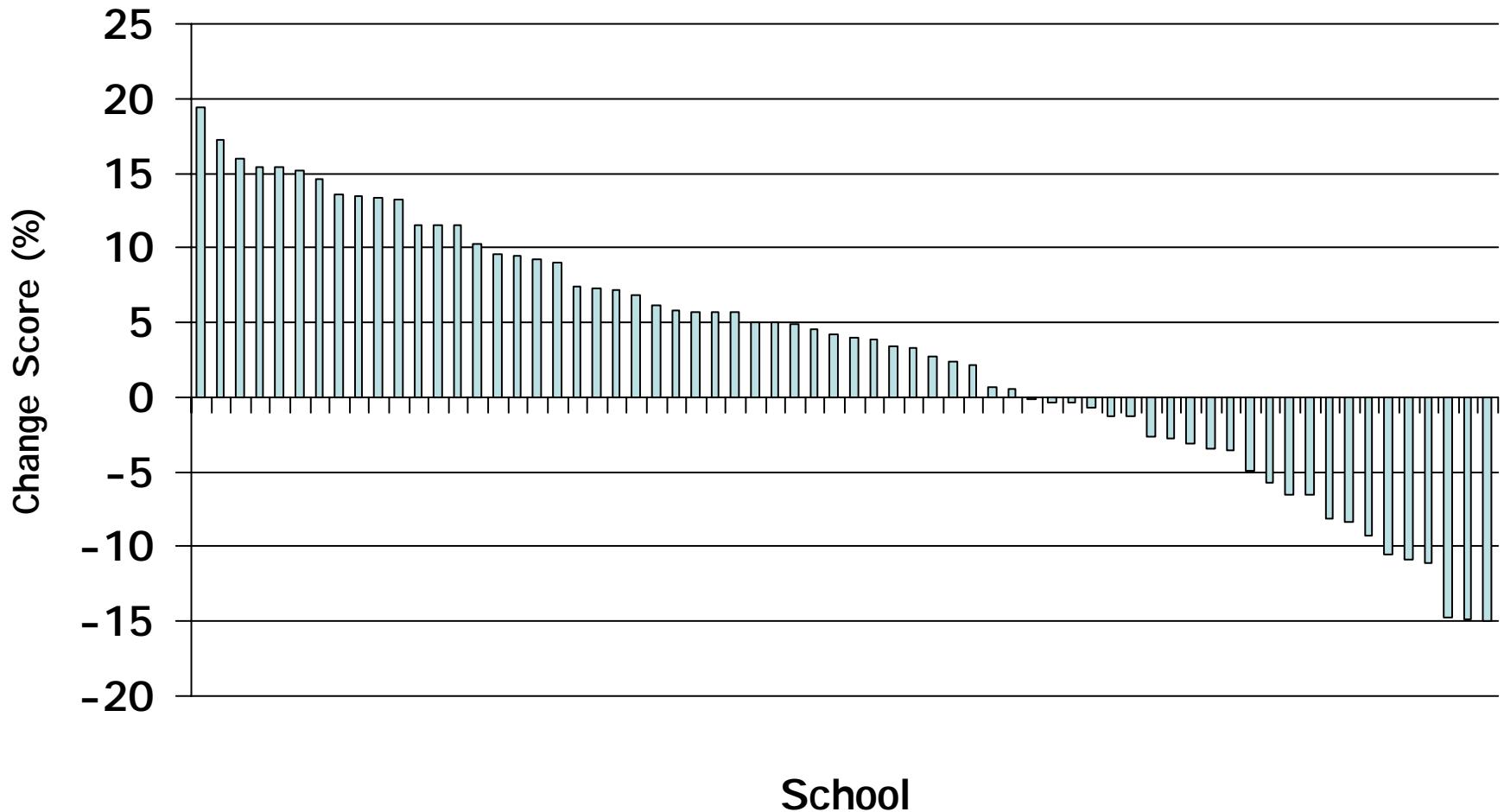
Findings pertaining to Gr 11 Maths

Predicted	←	Variables	Regression coefficient		
		Predictor	P	Standardised	Unstandardised*
Schl Funct 2002	1a	Schl Intrv 2001/2	.071	-.210	-.020
Distr Funct 2002	1b	Mths Tchr Intrv 2001/2	.045	.241	.194
Mths11 Tchr Funct 2002	1c	Distr Intrv 2001/2	.006	.312	.074
Mths11 Lrnr Perf 2002	2a	Schl Funct 2002	.032	.251	.601
Mths11 Lrnr Perf 2002	2b	Distr Funct 2002	.048	.232	.062
Distr Intrv 2003/4	3a	Distr Funct 2002	.051	-.154	-.203
Distr Intrv 2003/4	3b	Distr Intrv 2001/2	***	.482	.825
Distr Intrv 2003/4	3c	Schl Intrv 2001/2	***	-.335	-.372
Schl Intrv 2003/4	3d	Distr Intrv 2001/2	.003	.302	.342
Schl Intrv 2003/4	3e	Schl Intrv 2001/2	***	.497	.365
Mths Tchr Intrv 2003/4	3f	Mths11 Tchr Funct 2002	.004	-.231	-1.379
Mths Tchr Intrv 2003/4	3g	Mths Tchr Intrv 2001/2	***	.646	.564
Schl Funct 2004	4a	Mths Tchr Intrv 2003/4	.002	.325	.035
Schl Funct 2004	4b	Mths11 Lrnr Perf 2002	***	.365	.159
Distr Funct 2004	4c	Distr Intrv 2003/4	***	.395	.359
Distr Funct 2004	4d	Distr Funct 2002	***	.367	.437
Mths11 Tchr Funct 2004	4e	Schl Funct 2002	.020	.269	.492
Mths11 Lrnr Perf 2004	5a	Mths11 Tchr Funct 2004	.036	.202	.275
Mths11 Lrnr Perf 2004	5b	Distr Intrv 2003/4	.001	.307	.065
Mths11 Lrnr Perf 2004	5c	Mths11 Lrnr Perf 2002	***	.511	.531

Findings pertaining to Gr 11 R&W

Predicted	←	Variables		Regression coefficient		
		Predictor	P	Standardised	Unstandardised*	
Distr Funct 2002	1a	Lang Tchr Intrv 2001/2	.005	.324	.252	
Lang11 Tchr Funct 2002	1b	Schl Intrv 2001/2	***	-.411	-.092	
Lang11 Lrnr Perf 2002	2a	Schl Funct 2002	***	.376	.995	
Lang11 Lrnr Perf 2002	2b	Lang11 Tchr Funct 2002	.001	.346	.391	
Distr Intrv 2003/4	3a	Lang11 Lrnr Perf 2002	.011	.191	.802	
Distr Intrv 2003/4	3b	Distr Intrv 2001/2	***	.439	.719	
Distr Intrv 2003/4	3c	Schl Intrv 2001/2	***	-.328	-.348	
Schl Intrv 2003/4	3d	Distr Intrv 2001/2	.009	.269	.298	
Schl Intrv 2003/4	3e	Schl Intrv 2001/2	.006	.309	.222	
Schl Intrv 2003/4	3f	Lang Tchr Intrv 2001/2	.002	.331	.214	
Lang Tchr Intrv 2003/4	3g	Lang Tchr Intrv 2001/2	***	.665	.640	
Schl Funct 2004	4a	Lang Tchr Intrv 2003/4	***	.378	.035	
Schl Funct 2004	4b	Lang11 Lrnr Perf 2002	***	.409	.160	
Distr Funct 2004	4c	Distr Intrv 2003/4	***	.362	.350	
Distr Funct 2004	4d	Distr Funct 2002	***	.390	.464	
Lang11 Tchr Funct 2004	4e	Lang Tchr Intrv 2003/4	.003	.325	.063	
Lang11 Tchr Funct 2004	4f	Lang11 Lrnr Perf 2002	.001	.346	.285	
Lang11 Tchr Funct 2004	4g	Distr Funct 2002	.001	-.334	-.081	
Lang11 Lrnr Perf 2004	5a	Schl Funct 2004	.102	.129	.342	
Lang11 Lrnr Perf 2004	5b	Lang11 Tchr Funct 2004	.049	-.149	-.189	
Lang11 Lrnr Perf 2004	5c	Lang11 Lrnr Perf 2002	***	.832	.867	

Grade 11 Language % change in teacher functionality : 2002 to 2004

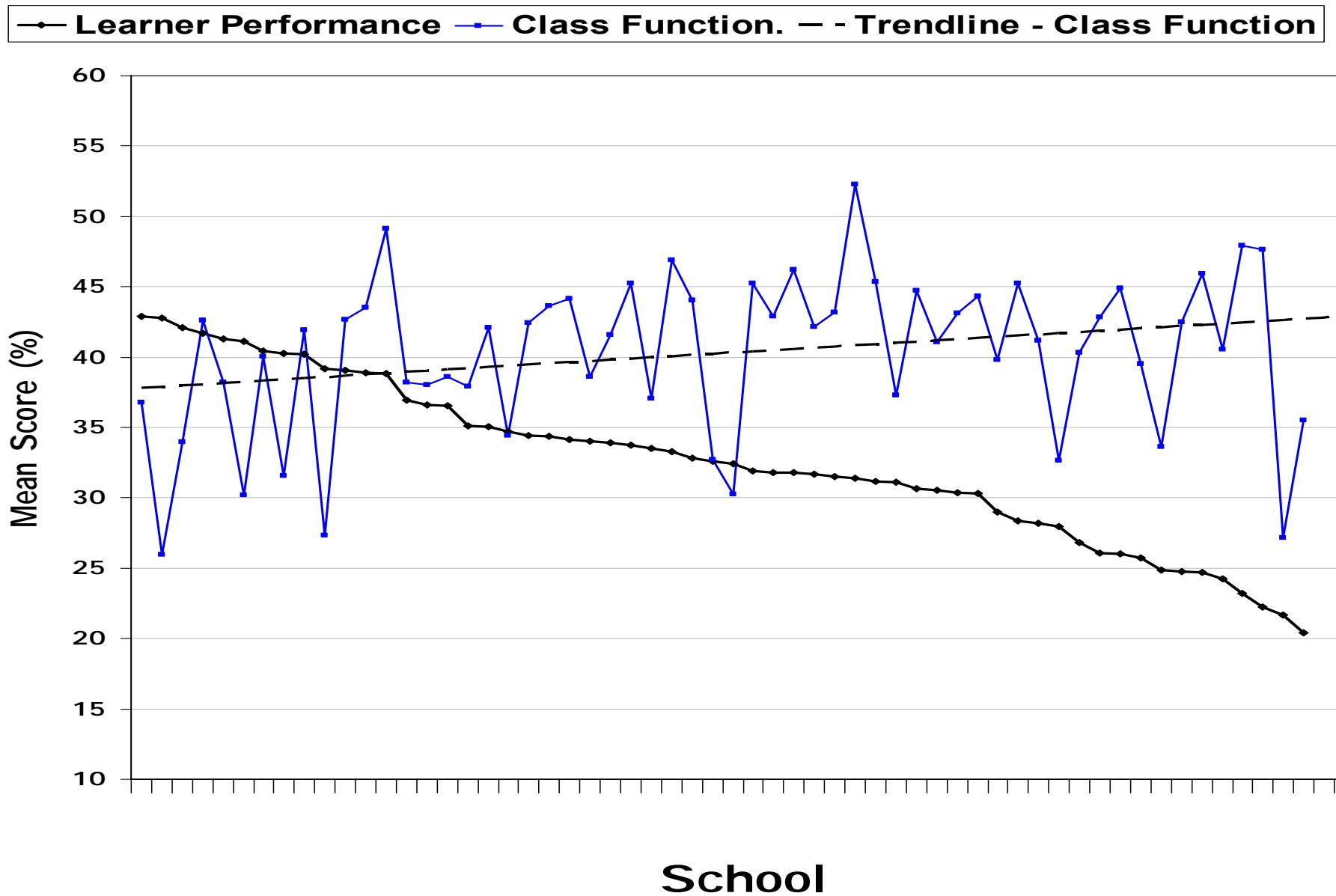


School

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Effect of teacher functionality on L11 Performance + Trend Line (Modified)



Passrates -- Gr 12 overall

Variables (highlighted ← already reported in Sect 7.2.3, Tab 7.11)			Regression coefficient		
Predicted	←	Predictor	P	Standardised	Unstandardised*
Distr Funct 2002	1a	Lang Tchr Intrv 2001/2	.005	.324	.252
Lang11 Tchr Funct 2002	1b	Schl Intrv 2001/2	***	-.411	-.092
Matric passrate in 2002	2b	Lang11 Tchr Funct 2002	.005	.332	1.181
Distr Intrv 2003/4	3b	Distr Intrv 2001/2	***	.454	.754
Distr Intrv 2003/4	3c	Schl Intrv 2001/2	***	-.370	-.399
Schl Intrv 2003/4	3d	Distr Intrv 2001/2	.009	.270	.300
Schl Intrv 2003/4	3e	Schl Intrv 2001/2	.007	.304	.219
Schl Intrv 2003/4	3f	Lang Tchr Intrv 2001/2	.001	.341	.221
Lang Tchr Intrv 2003/4	3g	Lang Tchr Intrv 2001/2	***	.665	.640
Schl Funct 2004	4a	Lang Tchr Intrv 2003/4	.009	.415	.038
Schl Funct 2004	4b	Matric passrate in 2002	.028	.222	.027
Schl Funct 2004	4i	Schl Funct 2002	.040	.214	.217
Schl Funct 2004	4ii	Lang11 Tchr Funct 2002	.068	.187	.081
Distr Funct 2004	4c	Distr Intrv 2003/4	***	.368	.350
Distr Funct 2004	4d	Distr Funct 2002	***	.388	.460
Lang11 Tchr Funct 2004	4e	Lang Tchr Intrv 2003/4	.005	.321	.062
Lang11 Tchr Funct 2004	4iii	Schl Funct 2002	.016	.277	.598
Lang11 Tchr Funct 2004	4g	Distr Funct 2002	.003	-.325	-.078
Matric passrate in 2004	5i	Lang Tchr Intrv 2003/4	.002	.297	.211
Matric passrate in 2004	5c	Matric passrate in 2004	***	.580	.555

Passrates -- Gr 12 English HG

Variables (highlighted ← already reported in Sect 7.2.3, Tab 7.11)			Regression coefficient		
Predicted	←	Predictor	P	Standardised	Unstandardised*
Schl Funct 2002	1i	Lang Tchr Intrv 2001/2	.026	-.270	-.023
Distr Funct 2002	1ii	Distr Intrv 2001/2	.072	.223	.284
Distr Funct 2002	1a	Lang Tchr Intrv 2001/2	.009	.327	.245
Lang11 Tchr Funct 2002	1b	Schl Intrv 2001/2	***	-.468	-.100
English passrate in 2002	2i	Distr Funct 2002	.000	-.559	-.384
Distr Intrv 2003/4	3b	Distr Intrv 2001/2	***	.450	.746
Distr Intrv 2003/4	3c	Schl Intrv 2001/2	***	-.372	-.399
Schl Intrv 2003/4	3d	Distr Intrv 2001/2	.010	.268	.298
Schl Intrv 2003/4	3e	Schl Intrv 2001/2	.007	.306	.220
Schl Intrv 2003/4	3f	Lang Tchr Intrv 2001/2	.002	.333	.219
Lang Tchr Intrv 2003/4	3g	Lang Tchr Intrv 2001/2	***	.662	.643
Schl Funct 2004	4a	Lang Tchr Intrv 2003/4	.000	.403	.035
Schl Funct 2004	4i	Schl Funct 2002	.045	.228	.227
Schl Funct 2004	4ii	Lang11 Tchr Funct 2002	.033	.225	.098
Distr Funct 2004	4c	Distr Intrv 2003/4	***	.361	.349
Distr Funct 2004	4d	Distr Funct 2002	***	.371	.468
Lang11 Tchr Funct 2004	4e	Lang Tchr Intrv 2003/4	.008	.310	.058
Lang11 Tchr Funct 2004	4iii	Schl Funct 2002	.054	.223	.476
Lang11 Tchr Funct 2004	4g	Distr Funct 2002	.001	-.348	-.084
Matric passrate in 2004	5a	Schl Funct 2004	.002	.392	1.974
Matric passrate in 2004	5i	Distr Funct 2004	.014	-.283	-.127
Matric passrate in 2004	5b	Lang11 Tchr Funct 2004	.051	-.246	-.576

Passrates -- Gr 12 Mathematics

Variables (highlighted ← already reported in Sect 7.2.3, Tab 7.10)			Regression coefficient		
Predicted	←	Predictor	P	Standardised	Unstandardised*
Distr Funct 2002	1b	Mths Tchr Intrv 2001/2	.035	.257	.214
Mths11 Tchr Funct 2002	1c	Distr Intrv 2001/2	.009	.312	.072
Distr Intrv 2003/4	3a	Distr Funct 2002	.006	-.200	-.267
Distr Intrv 2003/4	3i	Maths passrate in 2002	.004	.209	.288
Distr Intrv 2003/4	3b	Distr Intrv 2001/2	***	.440	.767
Distr Intrv 2003/4	3c	Schl Intrv 2001/2	***	-.399	-.461
Schl Intrv 2003/4	3d	Distr Intrv 2001/2	.002	.327	.363
Schl Intrv 2003/4	3e	Schl Intrv 2001/2	***	.469	.345
Mths Tchr Intrv 2003/4	3f	Mths11 Tchr Funct 2002	.008	-.219	-1.288
Mths Tchr Intrv 2003/4	3g	Mths Tchr Intrv 2001/2	***	.657	.586
Schl Funct 2004	4a	Mths Tchr Intrv 2003/4	.013	.286	.031
Schl Funct 2004	4i	Schl Funct 2002	.022	.270	.274
Distr Funct 2004	4c	Distr Intrv 2003/4	.002	.344	.297
Distr Funct 2004	4ii	Maths passrate in 2002	.003	.319	.381
Distr Funct 2004	4d	Distr Funct 2002	.003	.318	.367
Mths11 Tchr Funct 2004	4e	Schl Funct 2002	.012	.301	.539
Maths passrate in 2004	5c	Maths passrate in 2002	***	.624	.615

Questions, Comments, Suggestions

