

## Appendix A: Studies by model design and measures of leadership

Author	Date	Sc.	N	Measure	Dep.Var	Analysis	Effects	g	d	95% C.I lower - upper	
Model A- Direct effects											
Bulach, Lunenberg & McCellan	1994	1	17	LBM, TSCI	Acadm	F-test	3	1.67	1.58	0.50	2.67
Durr	1986	1	25	CAT, PAL	Acadm	Corr	14	0.53	0.51	-0.28	1.31
Erickson	1987	1	102*	LEAD	Acadm	Corr	8	0.33	0.33	-0.06	0.72
Krug	1992	4	81	ILI, ICI, SAAS	Acadm	Corr	60	0.38	0.37	-0.24	1.01
Montgomery	1987	1	15	ILS	Acadm	M & SD	13	0.69	0.68	0.34	1.02
Schoch	1992	1	70	PIMRS	Effects	t-test	10	0.36	0.35	-0.12	0.82
Van de Grift	1990	1	275*	CITO	Acadm	Corr	8	0.04	0.04	-0.20	0.27
Model A1-Direct effects with antecedents											
Bista & Glasman	1998	4	188*	SLA	Acadm	Corr	4	0.12	0.12	-0.16	0.41
Blank	1987	3	32	Author	Acadm Attend	F-test	15	0.54	0.52	-0.34	1.37
Chapman	1998	1	46	VAPTI	Acadm	M & SD	4	1.05	1.02	0.18	1.86
Cheng	1994	1	164		Affect	Corr	40	0.31	0.31	0.00	0.62

Author	Date	Sc.	N	Measure	Dep.Var	Analysis	Effects	g	d	95% C.I lower - upper	
Finklea	1997	3	79	LBAIL& MAT	Acadm	Corr	4	0.34	0.34	-0.11	0.78
Fishman	1986	1	42	PPDS MCI	Acadm	Corr	30	0.44	0.43	0.18	1.04
Freeman	1987	1	19	Various CAT	High vs. low	M & SD	1	0.55	0.53	-0.39	4.45
Garner	1989	1	117*	LEAD	Acadm	p-value	1	1.32	1.31	0.91	1.71
Jackson	1986	2	91*	LBDQ CAT	Acadm	Corr	3	-0.24	-0.24	-0.65	0.18
Standley	1985	1	79*	LEAD	Effects	Corr	2	1.63	1.62	1.11	2.12
Model B- Mediated effects											
Bamburg & Andrews	1991	1	20	SAQ CAT	High vs. Low	T-Test	19	0.66	0.65	0.27	1.04
Buzzi	1990	1	423*	CSEQ	Effects	Corr	1	1.67	1.66	1.44	1.88
Cheng	1991	3	64	LBDQ OCDR	Effects	F-test	1	1.28	1.25	0.51	1.98
Dzyacky	1988	4	41	SII	Affect	Corr	7	1.27	1.25	0.58	1.92
Floyd	1999	1	69	LPI	Acadm	Corr	2	0.35	0.34	-0.13	0.82

Author	Date	Sc.	N	Measure	Dep.Var	Analysis	Effects	g	d	95% C.I lower - upper	
Hajnal, Walker & Sackney	1998	4	93	DSPQ	Effects	Corr	2	1.41	1.40	0.94	1.85
Hoy, Hannum, & Tschannen-Moran	1998	2	86	OCDQ, OHI	Acadm	Corr	6	1.10	1.09	0.64	1.54
Hoy, Tarter & Bliss	1990	3	58	OCDQ OCQ OHI	Acadm	Corr	9	0.29	0.28	-0.23	0.80
Philbin	1997	3	218*		High vs. Low	F- test	2	0.39	0.39	0.01	0.77
Rock	1988	1	85	Author	Acadm	Corr	3	0.57	0.56	0.13	1.00
Silins	1994a	1	291	Author	Acadm	Corr	2	1.36	1.35	1.10	1.61
Silins	1994b	1	256	Author	Acadm	Corr	2	0.49	0.49	0.24	0.74
Silins	1992	1	256	Author	2, 3	Corr	10	0.35	0.35	0.10	0.59
Williams	1995	1	202*	LBDQ,POS CSEQ	High vs Low	T-Test	4	1.06	1.06	0.72	1.39
Model B1- Mediated effects with antecedents											
Brice	1992	4	91	LPI-S LPI-O	High vs. low	T-Test	1	0.94	0.90	0.01	1.79
Heck	1992	1, 3	40	CAT LEAD	High vs. Low	M & SD	16	0.80	0.78	0.13	1.43
Heck, Larsen & Marcoulides	1990	3	198	IAQ	High vs Low	M & SD	44	0.67	0.67	0.39	0.96

Author	Date	Sc.	N	Measure	Dep.Var	Analysis	Effects	g	d	95% C.I lower - upper	
Hoy, Hannum & Tschannen-Moran	1998	2	86s	OCDQ OHI	Achieve ment	Corr	6	1.10	1.09	0.77	1.41
Leithwood & Jantzi	1999	1	94s	Author	Affects	Corr	2	0.45	0.45	0.04	0.86
Leithwood & Jantzi	1998	4	110s	Author	Affects	Corr	6	0.66	0.65	0.27	1.04
Silins, Mulford & Zarins	1999	3	96	Author	Affect & Other	Corr	5	0.74	0.74	0.32	1.15
Snyder & Ebmeier	1992	4	30s	Author	Varied	Corr	5	0.25	0.25	-0.47	0.97

\* individuals; CESQ – Connecticut School Effectiveness Questionnaire; LBA II – Leadership Behavior Analysis II; LBDQ – Leadership Behavior Descriptive Questionnaire; LBM - Leadership Behavioral Matrix; IAQ – Instructional Activity Questionnaire; LEAD – Leadership Effectiveness and Adaptability Description; LPI – Leadership Practices Inventory; POS – Profile of a Principal; PIMRS – Principal Instructional Management Rating Scale; PAL – Profile for Assessment of Leadership; SSI – School Improvement Inventory; OHI – Organizational Health Inventory; PPDS – Principal Performance Description Survey; MLQ – Multifactor leadership Questionnaire; OCDQ – Organizational Climate Description Questionnaire; DSPQ – Dynamic School Project Questionnaire; SAQ – Staff Assessment Questionnaire; MCI – My Class Inventory; TSCI – Tennessee School Climate Inventory; ICI – Instructional Climate Inventory; SAAS – School Administrator Assessment Survey

## Appendix B: Table of descriptives for effect sizes

<b>Descriptives</b>			
		Statistic	Std. Error
G_EFFECT	Mean	.56913221	2.796E-02
	95% Confidence Interval for Mean	.51413708	
	Lower Bound		
	Upper Bound	.62412734	
	5% Trimmed Mean	.54765004	
	Median	.48507250	
	Variance	.265	
	Std. Deviation	.51477581	
	Minimum	-.723077	
	Maximum	3.277606	
	Range	4.000683	
	Interquartile Range	.65701610	
	Skewness	1.027	.132
	Kurtosis	3.087	.264

## Appendix C: Letter of apology from Dr. Goldring

Date: Tue, 22 May 2001 15:37:13 -0500 (Central Daylight Time)  
From: "Goldring, Ellen B" <ellen.b.goldring@vanderbilt.edu>  
Subject: request  
To: labrown4@vt.edu  
X-Mailer: Simeon for Win32 Version 4.1.5 Build (43)  
Priority: NORMAL  
X-Authentication: none

I am sorry that I do not have access to that data since it was done such a long time ago while I was a faculty member in Israel.

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#### Appendix D: Studies used in the meta-analysis

Bamburg, J. D., & Andrews, R. L. (1991). School goals, principals, and achievement. School Effectiveness and School Improvement, 2, (3), 175-191.

Bista, M. B., & Glasman, N. S. (1998). Principals' approaches to leadership, their antecedents and student outcomes. Journal of School Leadership, 8, 109-136

Blank, R. K. (1987). The role of principal as leader: Analysis of variation in leadership of urban high schools. Journal of Educational Research, 81, (2), 69-80.

Brice, R. W. (1992). Principals in Saskatchewan rural schools: Their leadership behaviors and school effectiveness. Unpublished doctoral dissertation. San Diego; University of San Diego.

Bulach, C., & Lunenburg, F. C. (1994). The influence of the principal's leadership style on school climate and student achievement. Paper presented at the annual meeting of AERA, New Orleans, April 1994 (ERIC Documents Reproduction Service No. ED 359 668).

Buzzi, M. J. (1990). The relationship of school effectiveness to selected dimensions of principals' instructional leadership in elementary schools in the State of Connecticut. Unpublished doctoral dissertation. University of Bridgeport.

Chapman, J. B. (1998). Professional treatment of teachers and student academic achievement. Unpublished doctoral dissertation, VA: Virginia Polytechnic Institute and State University.

Cheng, Y. C. (1994). Principal's leadership as a critical factor for school performance: Evidence from multi-levels of primary schools. School Effectiveness and School Improvement, 5, (3), 299-317.

Cheng, Y. C. (1991). Leadership style of principals and organizational process in secondary schools. Journal of Educational Administration, 29, (2), 25-37.

Durr, M. T. (1986). The effects of teachers' perceptions of principal performance on student cognitive gains. Unpublished doctoral dissertation. Indiana: Indiana University.

Dzyacky, K. M. (1988). The relationships of teacher perceptions and administrator time on instructional leadership with school learning climate. Unpublished doctoral dissertation. Iowa: Iowa State University.

Ericksen, A. M. (1987). The relationship between principal and teacher perceptions of principal leadership behavior and student achievement. Unpublished doctoral dissertation. Illinois: Northern Illinois University.

Finklea, C. W. (1997). Principal leadership style and the effective school. Unpublished doctoral dissertation. SC: University of South Carolina.

Fishman, G. B. (1986). The influence of elementary principals' effective leadership behaviors on student achievement. Unpublished doctoral dissertation. TX: Texas A & M University.

Floyd, J. E. (1999). An investigation of the leadership style of principals and its relation to teachers' perceptions of school mission and student achievement. Unpublished doctoral dissertation. NC: North Carolina State University.

Freeman, E. (1987). The relationship between school effectiveness and elementary school principals' behaviors. Unpublished doctoral dissertation. University of Washington.



Garner, D. W. (1989). A comparative study of the leadership styles of elementary principals from chapter one schools with principals from non-chapter one schools to determine if style is related to the achievement of third grade students. Unpublished doctoral dissertation. Indiana: Ball State University.

Hajnal, V., Walker, K., & Sackney, L. (1998). Leadership, organizational learning, and selected factors relating to the institutionalization of school improvement initiatives. The Alberta Journal of Educational Research, 46, (1), 70-89.

Heck, H. R. (1992, Spring). Principals' instructional leadership and school performance: Implications for policy development. Educational Evaluation and Policy Analysis, 14, (1), 21-34.

Heck, R., Larsen, T., & Marcoulides, G. (1990). Principal leadership and school achievement: the validation of a causal model. Educational Administration Quarterly, 26, (2), 96-145.

Hoy, W. K., Hannum, J., & Tschannen-Moran, M. (1998 July). Organizational climate and student achievement: A parsimonious and longitudinal view. Journal of School Leadership, 8, 333-359.

Hoy, W. T., Tarter, C. J., & Bliss, J. R. (1990). Organizational climate, school health, and effectiveness: A comparative analysis. Educational Administration Quarterly, 26, (3), 260-279.

Jackson, S. L. (1986). The relationship of Mississippi public school principals' style of leadership and eight graders' achievement scores. Unpublished doctoral dissertation. Mississippi: Mississippi State University

Krug, S. E. (1992), Instructional leadership, school instructional climate, and student learning outcomes. (ERIC Documents Reproduction Service No. ED 359 668).

Leithwood, K., & Jantzi, D. (1999). Transformational school leadership effects: A replication. School Effectiveness and School Improvement, 10, (4), 451-479.

Leithwood, K., & Jantzi, D. (1998). Distributed leadership and student engagement in school. Paper presented at the annual meeting of the American Educational Research Association, San Diego. (ERIC Document Reproduction Service No. ED 029 411).

Montgomery, M. A. (1987). The effectiveness of the instructional leadership system on principals' leadership behaviors and student achievement. Unpublished doctoral dissertation. TX: East Texas State University.

Philbin, L. P. (1997). Transformational leadership and the secondary school principal. Unpublished doctoral dissertation. Purdue University.

Rock, D. A. (1988). Relationship between teachers' perceptions of the effective schools characteristics and the achievement level of students. Unpublished doctoral dissertation. University of Missouri-Columbia.

Schoch, A. P. (1992). The relationship between instructional leadership behavior, school effectiveness, school size, gender, race, and years of principalship experience in elementary schools in South Carolina. Unpublished doctoral dissertation. SC: University of South Carolina.

Silins, H. C. (1992). Effective leadership for school reform. The Alberta Journal of Educational Research, 38, (4), 317-334.

Silins, H. C. (1994a). The relationship between transformational and transactional leadership and school improvement outcomes. School Effectiveness and School Improvement, 5, (3), 272-298.

Silins, H. C. (1994 b). Leadership characteristics and school improvement. Australian Journal of Education, 38, (3), 266-281.

Silins, H. C., Mulford, B., & Zarins, S. (1999). Leadership for organizational learning and student outcomes. The LOLSO Project. Paper presented at the annual meeting of AERA, Montreal, 1999. (ERIC Document Reproductive Service No. ED 432 046).

Snyder, J., & Ebmeier, H. (1992). Empirical linkages among principal behaviors and intermediate outcomes: Implications for principal evaluation. Peabody Journal of Education, 68, (1), 75-107.

Standley, N. L. (1985). Administrative style and student achievement: A correlational study. Unpublished doctoral dissertation. Washington State University.

Van de Grift, W. (1990). Educational leadership and academic achievement in elementary education. School Effectiveness and School Improvement, 1, (3), 26-40.

Williams, R. E. (1995). Leadership styles of effective elementary principals in urban schools. Unpublished doctoral dissertation. Wayne State University.

Appendix E: Reviewed studies not included in the meta-analysis

Brewer, D. J. (1993), principals and student outcomes: Evidence from U.S. High Schools. Economics of Education review, 12, (4), 281-292

Eberts, R. W., & Stone, J. A. (1988). Student achievement in public schools: Do principals make a difference?. Economics of Education Review, 7, (3), 291-299.

Geijsel, F., Slegers, P., & van den Berg, R. (1999). Transformational leadership and the implementation of large-scale innovation programs. Journal of educational Administration, 37, (4), 309-328.

Goldring, E. B., & Pasternack, R. (1994). Principals' coordinating strategies and school effectiveness. School Effectiveness and School Improvement, 5, (2), 239–253.

Hallinger, P., Bickman, L., & Davis, K, (1996). School context, principal leadership, and student reading achievement. The Elementary School Journal, 96, (5), 527-549.

Heck, R. H. (1993). School context, principal leadership, and achievement: the case of secondary schools in Singapore. The Urban Review, 25, (2), 151-166.

Heck, R. H., & Marcoulides, G. A. (1993). Principal leadership behaviors and school achievement. NASSP, 77, (553), 20-28.

Leithwood, K., Jantzi, D., Silins, H., & Dart, B. (1993). Using the appraisal of school leaders as an instrument for school restructuring. Peabody Journal of Education, 68, (2), 85-109.

Leitner, D. (1994). Do principals affect student outcomes: An organizational perspective. School Effectiveness and School Improvement, 5, (3), 219-238.

Ogawa, R., & Hart, A. (1985). The effect of principals on the instructional performance of schools. The Journal of Educational Administration, XXIII, (1), 59 – 72.

Sheppard, B. (1996). Exploring the transformational nature of instructional leadership. Journal of Educational Research, XL11, (4) 325-344

Van de Grift, W., & Houtveen, A. A. M. (1999). Educational leadership and pupil achievement in primary education. School Effectiveness and School Improvement, 10, (4), 373-389.