IMPROVING EDUCATIONAL QUALITY THROUGH ENHANCING COMMUNITY PARTICIPATION: RESULTS FROM A RANDOMIZED FIELD EXPERIMENT IN INDONESIA

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ONLINE APPENDIX

APPENDIX 1

Training of school committee members

The training material used in this experiment is an abridged version of training developed for the *Creating Learning Communities for Children* (CLCC) program.[1] CLCC consists of three main components (Ministry of National Education, 2003). The first, namely *school-based management,* trains school principals, teachers, and community members to collaboratively develop school development plans. Meanwhile, the second component, *active, joyful, and effective learning,* focuses on moving classroom teaching away from rote memorization to more interactive learning. Finally, the *community participation* component trains communities and schools to work together to implement their plans. The idea is to have schools involve communities in planning and organizing their activities, and encourage communities to support them. Table A11 provides a breakdown of the time spent on each of the modules.

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[1] CLCC began in 1999 as an effort to create a model of schools management, and by 2002, was adopted by the Ministry of National Education as the official model for school-based management in primary schools (Ministry of National Education, 2003). The program – whose development was supported by UNICEF, UNESCO, and the New Zealand AID – trained school principals, teachers, and communities to plan for the development of their schools and mobilize local resources.

All three components of the CLCC program are included in the training modules for this experiment.[2] However, unlike in the regular CLCC, the training modules in this experiment are geared only towards school committee members, without special modules for school principals and teachers. Moreover, the training materials are also significantly shorter than those in a regular CLCC training. The length of the training in this experiment is two days and a visit to a model school. In contrast, the recommended length of the first (out of four) packages of a regular CLCC training (inclusive of the school visit) is 6 days (Ministry of National Education, 2005a). Meanwhile, the remaining three packages would require an additional 9 training days for the school committee members (Ministry of National Education, 2005b, 2006a, 2006b).

In addition, our approach also significantly differs from CLCC with regards to the reliance on "school clusters". CLCC encourages the formation of working groups of school principals and teachers, as well as school committee fora among CLCC schools that are located close to each other in a school cluster. However, this experiment examines the effects of training on individual schools: each treatment school – and not school cluster – that received training was stratified-randomly selected from a population of schools. Therefore, we are unable to implement CLCC's school-cluster approach in training for this experiment.

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2   More specifically, the training for this experiment comprises five modules: (i) community participation and school quality; (ii) the role of the school committee; (iii) school budget and exploring local potentials (i.e., school-based management); (iv) sustaining community participation; and (v) active, joyful, and effective learning.

References:

Ministry of National Education, 2003, *Creating Learning Communities for Children: Improving Primary Schools through School Based Management and Community Participation.* Jakarta: Indoneisa, UNICEF, UNESCO, Government of Indonesia.

Ministry of National Education, 2005a, *Paket Pelatihan 1: Peningkatan Mutu Pendidikan Dasar Melalui Manajemen Berbasis Sekolah, Peran Serta Masyarakat, Pembelajaran Aktif, Kreatif, Efektif dan Menyenangkan.* Downloaded from http://mbeproject.net/download.html.

Ministry of National Education, 2005b, *Paket Pelatihan 2: Peningkatan Mutu Pendidikan Dasar Melalui Manajemen Berbasis Sekolah, Peran Serta Masyarakat, Pembelajaran Aktif, Kreatif, Efektif dan Menyenangkan.* Downloaded from http://mbeproject.net/download.html

Ministry of National Education, 2006a, *Paket Pelatihan 3: Peningkatan Mutu Pendidikan Dasar Melalui Manajemen Berbasis Sekolah, Peran Serta Masyarakat, Pembelajaran Aktif, Kreatif, Efektif dan Menyenangkan.* Downloaded from http://mbeproject.net/download.html

Ministry of National Education, 2006b, *Paket Pelatihan 4: Peningkatan Mutu Pendidikan Dasar Melalui Manajemen Berbasis Sekolah, Peran Serta Masyarakat, Pembelajaran Aktif, Kreatif, Efektif dan Menyenangkan.* Downloaded from http://mbeproject.net/download.html

Tape, S. and B. Irianto, 2010, *Petunjuk Teknis Implementasi Manajemen Sekolah, PAKEM, dan Peran Serta Masyarakat Melalui Gugus Sekolah,* Jakarta: Indonesia, Ministry of National Education, UNICEF, UNESCO.

Appendix 2

Table A1: Study timeline

Activity	Period
Baseline survey	January to February 2007
Training of school committees	July to September 2007
Linkage	June to October 2007
Elections	April to August 2007
Disbursement of first block grant	January 2008
Midline survey	April 2008
Qualitative study	July 2008
Endline survey	From October to November 2008
Disbursement of second block grant	December 2008

Table A2: Attrition analysis (linear probability model)

	Grant, G (1)	Election, E (2)	Linkage, L (3)	Training, T (4)	L+E (5)	L+T (6)	T+E (7)
Intervention	0.002	-0.019	0.006	0.002	-0.011	0.008	-0.019
	(0.023)	(0.014)	(0.014)	(0.014)	(0.020)	(0.019)	(0.017)
Baseline score	-0.040***	-0.038***	-0.028***	-0.024***	-0.038***	-0.017*	-0.040***
	(0.012)	(0.008)	(0.008)	(0.009)	(0.012)	(0.009)	(0.010)
Baseline score* intervention	0.007	0.010	-0.010	-0.017	-0.001	-0.023*	-0.009
	(0.017)	(0.012)	(0.011)	(0.011)	(0.018)	(0.013)	(0.013)
Baseline summary indices							
Awareness of school committee	0.064*	0.030	0.031	0.031	0.048	0.026	0.081***
	(0.036)	(0.023)	(0.023)	(0.023)	(0.030)	(0.029)	(0.028)
Parentel level inputs to education	0.039	0.041	0.045	0.044	0.078*	0.031	0.027
	(0.047)	(0.027)	(0.028)	(0.027)	(0.042)	(0.032)	(0.027)
Teacher level inputs to education	0.083**	0.094***	0.093***	0.092***	0.094**	0.075**	0.075**
	(0.036)	(0.026)	(0.026)	(0.025)	(0.042)	(0.033)	(0.029)
School based management	0.033	0.003	0.001	0.001	-0.021	0.042	0.010
	(0.034)	(0.023)	(0.024)	(0.023)	(0.028)	(0.035)	(0.024)
Community level inputs to education	-0.034	-0.016	-0.018	-0.018	-0.022	-0.025	-0.024
	(0.035)	(0.017)	(0.017)	(0.016)	(0.027)	(0.021)	(0.027)

* $p<0.10$, ** $p<0.05$, *** $p<0.01$

Estimated impact on attrition using OLS. The outcome is the probability of matching a student in the baseline with a student in the endline. Baseline score is the sum of language and mathematics scores. Estimations include stratum fixed effects because assignment of treatment was within each stratum. Robust standard errors reported in the parentheses. All standard errors clustered at the school level.

Table A3: Robustness checks for main results on test scores

	Grant, G OLS (2)	Election, E OLS (3)	Linkage, L OLS (4)	Training, T OLS (5)	L+E OLS (6)	L+T OLS (7)	T+E OLS (8)
Panel B: Language test scores (average)							
(A): Language baseline test score, strata dummies	0.129	0.053	0.173**	-0.042	0.234**	0.134	0.015
	(0.094)	(0.069)	(0.068)	(0.069)	(0.094)	(0.087)	(0.103)
(A)+(B): Language baseline test score squared	0.134	0.052	0.175**	-0.044	0.235**	0.133	0.012
	(0.094)	(0.069)	(0.068)	(0.069)	(0.093)	(0.087)	(0.102)
(A)+(C): Mathematics baseline test score	0.127	0.057	0.172**	-0.046	0.237**	0.127	0.014
	(0.094)	(0.069)	(0.067)	(0.069)	(0.093)	(0.086)	(0.102)
(A)+(D): District fixed effects	0.130	0.069	0.137**	-0.065	0.230**	0.087	0.004
	(0.091)	(0.066)	(0.066)	(0.065)	(0.092)	(0.085)	(0.099)
(A)+(E): Baseline summary indices	0.161*	0.049	0.170**	-0.032	0.209**	0.134	0.024
	(0.092)	(0.070)	(0.068)	(0.068)	(0.092)	(0.084)	(0.106)
(A)+(B)+(C)+(D)+(E)	0.145	0.067	0.138**	-0.062	0.222**	0.088	-0.001
	(0.089)	(0.067)	(0.065)	(0.063)	(0.090)	(0.085)	(0.103)
Panel C: Mathematics test scores (average)							
(A): Mathematics baseline test score, strata dummies	-0.015	-0.008	0.070	-0.029	0.061	0.040	-0.036
	(0.080)	(0.050)	(0.050)	(0.050)	(0.075)	(0.068)	(0.066)
(A)+(B): Mathematics baseline test score squared	0.005	-0.018	0.065	-0.032	0.048	0.033	-0.049
	(0.078)	(0.049)	(0.048)	(0.049)	(0.073)	(0.065)	(0.065)
(A)+(C): Language baseline test score	-0.025	-0.006	0.071	-0.019	0.064	0.052	-0.023
	(0.079)	(0.049)	(0.049)	(0.049)	(0.073)	(0.066)	(0.064)
(A)+(D): District fixed effects	-0.023	-0.015	0.068	-0.051	0.065	0.020	-0.070
	(0.076)	(0.048)	(0.048)	(0.048)	(0.070)	(0.065)	(0.062)
(A)+(E): Baseline summary indices	0.016	-0.008	0.066	-0.025	0.048	0.036	-0.022
	(0.077)	(0.050)	(0.049)	(0.049)	(0.073)	(0.067)	(0.064)
(A)+(B)+(C)+(D)+(E)	0.007	-0.017	0.067	-0.043	0.051	0.023	-0.057
	(0.072)	(0.047)	(0.046)	(0.046)	(0.068)	(0.064)	(0.058)

* p<0.10, ** p<0.05, *** p<0.01

Robustness check for main specification reported in columns 2 to 8 in Panels B and C of Table 5. Specification A is identical to the results in Table 5 for average test scores. The specification controls for the baseline test score and strata dummies (equation 1 in the paper); the second row adds the baseline test score squared; the third row is similar to specification A but controls for both baseline test scores separately; the fourth row adds district fixed effects to A; the fifth row adds baseline summary indices; the last row includes all controls in the rows above.

Table A4: Impact on test scores by quintile (quintiles defined using baseline test score)

	Pre/Post Mean and SD (1)	Grant, G OLS (2)	Election, E OLS (3)	Linkage, L OLS (4)	Training, T OLS (5)	L+E OLS (6)	L+T OLS (7)	T+E OLS (8)
Panel A: Language test scores by quintiles								
1 (Low base score)	6.98/12.30	-0.067	0.097	0.138	-0.063	0.217	0.087	0.047
	[2.15/6.10]	(0.155)	(0.108)	(0.109)	-0.11	(0.148)	(0.152)	(0.156)
2	9.49/12.13	0.105	0.058	0.090	-0.072	0.149	0.015	0.009
	[2.08/5.71]	(0.100)	(0.086)	(0.087)	(0.084)	(0.111)	(0.114)	(0.115)
3	11.27/13.13	0.079	0.084	0.130	-0.084	0.214	0.046	0.003
	[1.94/6.97]	(0.139)	(0.092)	(0.091)	(0.092)	(0.132)	(0.113)	(0.131)
4	13.77/13.30	0.201*	-0.095	0.255***	0.012	0.163	0.262**	-0.084
	[2.07/6.36]	(0.121)	(0.084)	(0.082)	(0.085)	(0.108)	(0.105)	(0.128)
5 (High base score)	17.70/14.73	0.307**	0.110	0.262**	-0.054	0.412***	0.204	0.067
	[2.42/6.25]	(0.145)	(0.108)	(0.107)	(0.109)	(0.154)	(0.143)	(0.147)
Panel B: Mathematics test scores by quintiles								
1 (Low base score)	9.39/8.46	-0.166	-0.104	0.045	0.012	-0.061	0.085	-0.079
	[2.95/2.93]	(0.116)	(0.103)	(0.103)	(0.096)	(0.150)	(0.108)	(0.106)
2	13.83/8.44	-0.065	0.004	0.138**	-0.057	0.144	0.108	-0.037
	[2.68/2.92]	(0.102)	(0.063)	(0.060)	(0.061)	(0.096)	(0.091)	(0.084)
3	17.31/8.26	0.129	-0.000	0.019	-0.027	0.016	-0.012	-0.032
	[2.55/2.98]	(0.095)	(0.056)	(0.055)	(0.055)	(0.083)	(0.073)	(0.077)
4	19.92/9.06	-0.036	0.077	0.091	-0.020	0.178**	0.079	0.062
	[2.56/3.35]	(0.117)	(0.068)	(0.068)	(0.068)	(0.087)	(0.099)	(0.095)
5 (High base score)	23.12/10.20	0.104	-0.049	0.061	-0.057	0.001	0.014	-0.104
	[2.56/3.27]	(0.164)	(0.088)	(0.089)	(0.089)	(0.133)	(0.125)	(0.120)

* p<0.10, ** p<0.05, *** p<0.01

Columns 1 reports means and standard deviations for the control group in the baseline and endline (the means are in the first row and the standard deviations are in the second row, in brackets). For the test scores, we report the mean and standard deviation of the unstandardized test scores for the control group (what we used to calculate the z-scores). The unstandardized scores are on a scale of 0 to 30 because each test had 30 questions and each correct question was awarded one point. The following columns report the estimated treatment effects using OLS. All estimations include stratum fixed effects because assignment of treatment was within each stratum. Robust standard errors reported in the parentheses. All standard errors are clustered at the school level. Quintiles are defined using the standardized language score plus the standardized mathematics score.

Table A5: Intermediate outcome definitions

Variable and index	Variable description

Table A6: Awareness of school committees

Panel A: Parents' awareness of school committees

Pknow_scexist	Parents know there is a school committee (1=Yes)
Pknow_scmem	Parents know names of school committee members (1=Yes)
Pscanswer	Parents are able to answer series of questions about school committee activities and performance (1=Yes)

Panel B: Stakeholder opinions about school committee effectiveness

SPsceffective	Index of school committees' cooperation, support, outreach and involvement in the school and community, according to principals [0,1]
SCposcontr	Whether school committee helped meet school's needs during the first semester of previous school year (1=Yes)
Tscperception	Index of teachers' evaluation of school committee effectiveness, openness, and cooperation with school principal [0,1]

Panel C: The number of school committee meetings with education stakeholders

SCmeettripartite	Number of formal meetings with school committee, principal, parents in previous year
SCmeetprincipaltot	Number of informal and formal meetings with school committee, principal to discuss school issues/problems in the past year
SCintmeettot	Number of internal formal and informal school committee meetings without principal or parents in the past year
SCmeetparents	Number of formal meetings with school committee and parents, but principal not invited in the past year
SCmeetdinas	Number of formal meetings between school committee and Dinas kab/kota/keca (invited by Dinas) in the past six months
SCmeetcomm	Index of school committee meeting with any set of community groups in the first semester of the previous school year [0,1]
SCmeetbpd	Whether school committee has ever had a meeting with village council (1=Yes)
SPmeetsc	Number of informal meetings with principal and school committee representative + number of formal meetings with principal and school committee members + number of formal meetings with entire school committee in the past month
Tscmeet	Number of times school committee invited teachers to discuss issues and problems at the school in the previous school year

Table A7: Parent level inputs to education

Panel A: Parents financial and in-kind support for school committees

SCparfundraise	Parental contributions in the first semester of previous school year (Rupiah in millions)
SCparinkind	Whether parents provided in-kind donations in the first semester of previous school year
SCsizeinkind	School committees' subjective assessment of in kind contributions of parents to school committee in past semester (1=Large)
Pcont	Amount of voluntary financial and in-kind donations from parents to school committee in past year (Rupiah in thousands)
Pcont_physical	Whether parents contributed in-kind to school committee in past year (1=Yes)

Panel B: Parents' support for and involvement in education

Pmeet_teacher	Number of times parents met with teacher in the last three months to discuss child's performance (other than to pick up report card)

Variable and index	Variable description
Pvisit	Whether parents have ever come to school to observe class (1=Yes)
Pallhh_min	Total number of minutes all household members accompanied child studying at home in past week
Psatparents	Parents' satisfaction with parents' involvement in school and learning (1=Yes)
Pchildatt	Index of emphasis parents put on child's education (compilation of five opinion questions) [0,1]
SCsatparents	School committee representatives' satisfaction with parents' support for pupils' education (1=Satisfied)
SPsatpar	Principals' satisfaction with parents' support for pupils' education (1=Satisfied)
SPparentsinvolve	Index of principals' assessment of parents' involvement in school and learning [0,1]
Tsatpar	Teachers' satisfaction with parents' support for pupils' education (1=Satisfied)
Tparentsperception	Index of teachers assessment whether parents of her/his pupils can help students improve achievement [0,1]
Tparentsperception1	Teachers' perception about parents' involvement (actual and desired)
Shomesupport	Index of whether someone in the household promotes, accompanies and answers questions relating to home study [0,1]

Table A8: Teacher level inputs to education

Panel A: Number of teachers

PNSteach	Number of civil servant teachers
GTTteach_govt	Number of contract teachers hired by government
GTTteach_school	Number of contract teachers hired by school directly

Panel B: Teacher effort

SCsatteachers	School committee representatives' satisfaction with quality and performance of teachers (1=Satisfied)
SCteachnoprob	School committee representatives' perception of whether teacher quality has been a problem (1=Not problematic)
SPsatteach	Principals' satisfaction with quality and performance of teachers (1=Satisfied)
Tsatteach	Teachers' satisfaction with quality and performance of teachers (1=Satisfied)
Psatteachers	Parents' satisfaction with quality and performance of teachers (1=Satisfied)
Pteacherperception	Index of parents' perceptions of teacher effort and approachability [0,1]
Thours	Number of hours worked per day in past week on teaching activities
Tmeetparents	Number of times in past three months that teacher met with parents to discuss student learning
OBfractwithteach	Fraction of classrooms with teachers (of those classrooms with teachers)

Variable and index	Variable description

Table A9: School based management

Panel A: Financial accountability of school management to parents and school committees

SCrapbs	Index of involvement of school committee in developing school budget (according to school committee) [0,1]
SCrecrapbs	Whether school committee received the school budget in previous school year (1=Yes)
SCdistrapbs	Whether materials about school funding and budgeting were distributed to parents in previous school year (1=Yes)
SPinviterapbs	Index of involvement of school committee and community in developing school budget, according to principal [0,1]
SPparentsrapbs	Whether parents were told about school funding and budgeting in the previous school year (1=Yes)
Pmtgrapbs	Whether there was a meeting at the school about the budget (1=Yes)
Prapbs	Whether parents were told about school funding and budgeting in the previous school year (1=Yes)

Panel B: Principals' performance and management of teachers

SPmeetteach	Number of meetings between principal and teachers during previous school year
Tprincmeet	Number of routine meetings between principal and teachers in past year
SPteacheval	Index of whether principal conducts oral or written evaluations of teacher performance beyond compulsory yearly evaluation and whether results are given to teacher verbally or in writing [0,1]
Tprinceval	Index of whether principal conducts evaluations of teacher performance beyond compulsory yearly evaluation to teachers [0,1]
Tprincipal	Index of teachers' overall assessment of principal (principal rated on seven areas of performance) [0,1]
SPteachaward	Whether principal rewards teachers who perform well (through recognition or gift/money), according to principals (1=Yes)
SPteachaccount	Whether principal sanctions teachers who don't perform well (trough warnings or training), according to principals (1=Yes)
Treward	Whether principal rewards teachers who perform well (through recognition or gift/money), according to teachers (1=Yes)
Taccount	Whether principal sanctions teachers who don't perform well (through warnings or training), according to teachers (1=Yes)
SCprinceffort	School committee representatives' perception of whether principal has taken measures to address issues that are holding back learning (1=Yes)

Table A10: Community level inputs to education

Panel A: Village council's collaboration with schools and overall support for education in the village

SCbpd	Whether the school worked with the village council in the previous school year (1=Yes)
SCsatbpd	School committee representatives' satisfaction with village council's attention to education in the village (1=Satisfied)
SPbpd	Whether the school worked together with the village council in previous school year (1=Yes)
SPsatbpd	Principals' assessment of extent of village council's attention to education in village (conditional on principal knowing there is a village council in the village) (1=Satisfied)

Variable and index	Variable description
Panel B: Community support for schools and school committees	
SCsatcomm	School committee representatives' satisfaction with support from community (1=Satistfed)
SCnonbpd	Whether school committee cooperated with any non-educational community organizations other than the village council in the previous school year (1=Yes)
SCcomfundraise	Community, private sector and other contributions in the first semester of previous school year (Rupiah in millions)
SCcominkind	Whether community, private sector or any other private person/organization provided in-kind donations in the first semester of previous school year (1=Yes)
SPsatcomm	Principal's satisfaction with support from community (1=Satisfied)
SPnonbpd	Whether school cooperated with any non-educational community organizations other than the village council in the previous school year (1=Yes)
Psatcomm	Parents' satisfaction with support from community (1=Satisfied)
Tsatcomm	Teachers' satisfaction with support from community (1=Satisfied)

Letters before the variable name indicate type of questionnaire from which variable was drawn. SC = school committee. P = parents. T = teachers. SP = school principal. S = student. OB = school-level observational questionnaire.

Table A6: Awareness of school committee

	Pre/Post Mean and SD (1)	Grant, G OLS (2)	Election, E OLS (3)	Linkage, L OLS (4)	Training, T OLS (5)	L+E OLS (6)	L+T OLS (7)	T+E OLS (8)
Panel A: Parents' awareness of school committees								
Pknow_scexist	0.54/0.54	0.159***	0.046	0.029	0.023	0.085**	0.039	0.071*
	[0.38/0.35]	(0.046)	(0.030)	(0.030)	(0.031)	(0.042)	(0.041)	(0.042)
Pknow_scmem	0.22/0.22	0.098***	0.011	0.032*	0.002	0.045	0.019	0.012
	[0.22/0.21]	(0.027)	(0.019)	(0.019)	(0.019)	(0.028)	(0.027)	(0.025)
Pscanswer	0.61/0.57	0.088*	0.013	-0.006	0.025	0.018	0.015	0.038
	[0.35/0.35]	(0.049)	(0.028)	(0.029)	(0.029)	(0.040)	(0.042)	(0.040)
Panel B: Stakeholder opinions about school committee effectiveness								
SPsceffective	0.60/0.58	0.027	0.012	0.001	-0.006	0.015	-0.012	0.005
	[0.13/0.11]	(0.018)	(0.010)	(0.010)	(0.010)	(0.014)	(0.014)	(0.014)
SCposcontr	0.76/0.77	-0.027	0.026	0.034	-0.017	0.040	0.020	-0.001
	[0.43/0.42]	(0.070)	(0.042)	(0.044)	(0.043)	(0.062)	(0.064)	(0.059)
Tscperception	0.82/0.94	-0.029	0.024**	0.016	0.015	0.026	0.029	0.035**
	[0.11/0.11]	(0.023)	(0.012)	(0.012)	(0.012)	(0.018)	(0.018)	(0.016)
Panel C: The number of school committee meetings with education stakeholders								
SCmeettripartite	2.26/2.27	-0.043	0.128	-0.060	-0.112	-0.006	-0.183	0.076
	[1.42/1.77]	(0.258)	(0.142)	(0.144)	(0.142)	(0.181)	(0.179)	(0.205)
SCmeetprincipaltot	3.22/3.58	0.229	0.126	0.275	0.426	0.261	0.846	0.543
	[3.05/3.92]	(0.431)	(0.377)	(0.374)	(0.381)	(0.516)	(0.534)	(0.611)
SCintmeettot	1.65/1.22	0.708**	0.355	-0.351	0.461	-0.044	0.191	0.678
	[2.51/1.78]	(0.340)	(0.305)	(0.318)	(0.301)	(0.436)	(0.465)	(0.462)
SCmeetparents	0.10/0.17	-0.010	-0.008	-0.115*	0.104	-0.117	-0.016	0.102
	[0.56/0.48]	(0.091)	(0.068)	(0.064)	(0.066)	(0.112)	(0.103)	(0.096)
SCmeetdinas	0.92/0.53	0.272	-0.090	-0.214**	-0.003	-0.344***	-0.244**	-0.115
	[0.87/0.94]	(0.173)	(0.083)	(0.087)	(0.086)	(0.126)	(0.123)	(0.122)
SCmeetcomm	0.27/0.24	0.044	0.016	0.037	-0.021	0.046	0.009	-0.019
	[0.30/0.27]	(0.040)	(0.033)	(0.033)	(0.033)	(0.045)	(0.044)	(0.046)
SCmeetbpd	0.35/0.34	0.043	0.041	0.035	-0.003	0.076	0.021	0.027
	[0.48/0.48]	(0.071)	(0.051)	(0.052)	(0.052)	(0.070)	(0.074)	(0.072)
SPmeetsc	4.70/5.39	1.112	0.864	-0.413	-0.266	0.351	-0.555	0.368
	[4.19/5.83]	(0.994)	(0.791)	(0.715)	(0.734)	(0.924)	(0.889)	(1.070)
Tscmeet	1.42/1.81	0.127	0.358	-0.077	0.123	0.330	0.037	0.569
	[1.57/2.43]	(0.379)	(0.232)	(0.262)	(0.236)	(0.273)	(0.366)	(0.385)
Summary Index		0.154***	0.074*	-0.012	0.049	0.048	0.025	0.110*
		(0.054)	(0.041)	(0.042)	(0.041)	(0.060)	(0.060)	(0.060)

* p<0.10, ** p<0.05, *** p<0.01

Columns 1 reports means and standard deviations for the control group in the baseline and endline (the means are in the first row and the standard deviations are in the second row, in brackets). The following columns report the estimated treatment effects using OLS. All estimations include stratum fixed effects because assignment of treatment was within each stratum. Robust standard errors reported in the parentheses. Letters before the variable name indicate type of questionnaire from which variable was drawn. SC = school committee. P = parents. T = teachers. SP = school principal. S = student. OB = school-level observational questionnaire.

Table A7: Parent level inputs to education

	Pre/Post Mean and SD (1)	Grant, G OLS (2)	Election, E OLS (3)	Linkage, L OLS (4)	Training, T OLS (5)	L+E OLS (6)	L+T OLS (7)	T+E OLS (8)
Panel A: Parents' financial and in-kind support to school committees:								
SCparfundraise	0.62/2.20	-1.419	-0.317	0.458	0.699	0.147	1.415	0.408
	[3.91/12.80]	(1.526)	(0.438)	(0.424)	(0.453)	(0.316)	(0.925)	(0.295)
SCparinkind	0.15/.0.13	0.031	-0.040	0.015	0.085**	-0.046	0.070	0.034
	[0.36/0.34]	(0.051)	(0.042)	(0.041)	(0.041)	(0.057)	(0.056)	(0.053)
SCsizeinkind	0.11/0.10	0.009	-0.012	0.012	0.054*	-0.010	0.046	0.038
	[0.26/0.25]	(0.037)	(0.030)	(0.030)	(0.029)	(0.044)	(0.039)	(0.037)
Pcont	7097.64/6405.72	-2.7e+03	4883.991	1991.739	-375.462	5955.505	2119.113	4223.308
	[24292.80/23436.00]	(3309.804)	(3150.762)	(2288.924)	(3067.236)	(4143.527)	(1654.624)	(3280.726)
Pcont_physical	0.10/0.11	0.008	0.029	-0.047**	-0.006	-0.021	-0.051	0.027
	[0.24/0.22]	(0.036)	(0.023)	(0.023)	(0.024)	(0.032)	(0.032)	(0.034)
Panel B: Parents' support for and involvement in education:								
Pmeet_teacher	0.69/0.55	0.181	0.018	0.159	-0.164	0.126	-0.094	-0.128
	[1.50/1.58]	(0.157)	(0.188)	(0.193)	(0.158)	(0.211)	(0.219)	(0.287)
Pvisit	0.14/0.10	0.056*	-0.010	0.007	-0.039**	-0.009	-0.032	-0.039
	[0.22/0.19]	(0.029)	(0.019)	(0.019)	(0.019)	(0.027)	(0.025)	(0.029)
Pallhh_min	263.60/268.46	4.557	81.175**	9.015	25.020	77.263	50.291	106.454*
	[321.55/341.26]	(49.346)	(32.577)	(32.449)	(38.026)	(52.735)	(58.424)	(55.458)
Psatparents	0.61/0.62	0.002	0.013	0.008	0.005	0.020	0.015	0.017
	[0.11/0.08]	(0.015)	(0.009)	(0.009)	(0.008)	(0.013)	(0.011)	(0.012)
Pchildatt	0.71/0.71	0.002	0.009	-0.004	-0.007	0.010	-0.012	-0.003
	[0.11/0.10]	(0.015)	(0.010)	(0.010)	(0.010)	(0.014)	(0.014)	(0.014)
SCsat parents	0.59/0.61	-0.052*	0.007	0.026	0.012	0.024	0.033	0.017
	[0.19/0.17]	(0.027)	(0.017)	(0.017)	(0.016)	(0.023)	(0.024)	(0.022)
SPsatpar	0.53/0.56	-0.042	-0.010	0.016	-0.008	0.009	0.011	-0.029
	[0.19/0.18]	(0.027)	(0.020)	(0.019)	(0.020)	(0.025)	(0.029)	(0.026)
SPparents involve	0.52/0.51	0.014	0.017	-0.003	0.010	0.021	0.014	0.024
	[0.12/0.12]	(0.018)	(0.013)	(0.013)	(0.014)	(0.016)	(0.020)	(0.017)
Tsatpar	0.52/0.51	0.027	0.008	0.019	0.022	0.031	0.044	0.020
	[0.12/0.12]	(0.033)	(0.020)	(0.020)	(0.020)	(0.029)	(0.029)	(0.026)
Tparents perception	0.57/0.56	-0.048	0.010	0.017	0.023	0.012	0.020	0.027
	[0.50/0.50]	(0.079)	(0.051)	(0.052)	(0.051)	(0.070)	(0.070)	(0.072)
Tparents perception1	0.54/0.51	0.022	0.016	0.002	0.008	0.017	0.011	0.024
	[0.19/0.20]	(0.028)	(0.018)	(0.018)	(0.018)	(0.025)	(0.025)	(0.026)
Shome support	0.81/0.77	0.048*	0.018	-0.032*	-0.003	-0.019	-0.030	0.008
	[0.16/0.17]	(0.027)	(0.017)	(0.017)	(0.017)	(0.023)	(0.022)	(0.023)
Summary index		0.023	0.062*	0.025	0.026	0.070	0.048	0.074*
		(0.054)	(0.034)	(0.032)	(0.033)	(0.043)	(0.044)	(0.044)

* p<0.10, ** p<0.05, *** p<0.01

Columns 1 reports means and standard deviations for the control group in the baseline and endline (the means are in the first row and the standard deviations are in the second row, in brackets). The following columns report the estimated treatment effects using OLS. All estimations include stratum fixed effects because assignment of treatment was within each stratum. Robust standard errors reported in the parentheses. Letters before the variable name indicate type of questionnaire from which variable was drawn. SC = school committee. P = parents. T = teachers. SP = school principal. S = student. OB = school-level observational questionnaire.

Table A8: Teacher level inputs to education

	Pre/Post Mean and SD	Grant, G OLS	Election, E OLS	Linkage, L OLS	Training, T OLS	L+E OLS	L+T OLS	T+E OLS
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Panel A: Number of teachers								
PNSteach	7.09/7.60	-0.120	-0.152	-0.026	0.125	-0.147	0.143	-0.041
	[1.64/2.21]	(0.166)	(0.106)	(0.098)	(0.104)	(0.137)	(0.139)	(0.128)
GTTteach_govt	0.47/0.72	-0.007	0.080	-0.010	-0.051	0.112	-0.047	0.015
	[0.81/1.10]	(0.129)	(0.084)	(0.085)	(0.082)	(0.133)	(0.107)	(0.108)
GTTteach_school	1.21/1.91	0.150	-0.141	-0.139	-0.075	-0.346*	-0.213	-0.186
	[1.27/1.63]	(0.196)	(0.126)	(0.125)	(0.122)	(0.179)	(0.178)	(0.165)
Panel B: Teacher effort								
SCsatteachers	0.62/0.63	-0.017	-0.007	0.010	0.005	-0.005	0.017	0.000
	[0.13/0.13]	(0.021)	(0.014)	(0.014)	(0.014)	(0.021)	(0.020)	(0.017)
SCteachnoprob	0.81/0.80	0.028	0.017	0.011	-0.005	0.026	0.011	0.020
	[0.40/0.40]	(0.056)	(0.042)	(0.041)	(0.040)	(0.057)	(0.057)	(0.055)
SPsatteach	0.63/0.61	-0.004	0.021	0.011	0.000	0.023	0.010	0.022
	[0.12/0.12]	(0.021)	(0.015)	(0.014)	(0.014)	(0.021)	(0.018)	(0.019)
Tsatteach	0.66/0.63	-0.004	0.006	0.021	-0.015	0.024	0.006	-0.012
	[0.11/0.10]	(0.018)	(0.015)	(0.015)	(0.015)	(0.022)	(0.021)	(0.022)
Psatteachers	0.65/0.64	0.001	0.002	0.003	0.008	0.005	0.008	0.010
	[0.09/0.10]	(0.011)	(0.008)	(0.008)	(0.007)	(0.012)	(0.009)	(0.010)
Pteacherperception	0.59/0.61	-0.014	0.004	-0.009	-0.002	-0.006	-0.013	0.004
	[0.12/0.07]	(0.012)	(0.009)	(0.009)	(0.009)	(0.013)	(0.013)	(0.012)
Thours	5.80/5.78	0.199	0.587**	0.554*	0.150	1.000***	0.760*	0.644
	[2.81/3.18]	(0.431)	(0.279)	(0.284)	(0.285)	(0.369)	(0.430)	(0.397)
Tmeetparents	1.40/2.92	-0.957	-0.644	-0.534	0.570	-1.346	0.118	0.314
	[1.23/7.34]	(0.812)	(0.591)	(0.421)	(0.423)	(0.891)	(0.391)	(0.453)
OBfractwithteach	0.82/0.80	0.018	-0.053**	0.004	-0.019	-0.046	-0.009	-0.072**
	[0.35/0.37]	(0.030)	(0.021)	(0.021)	(0.023)	(0.029)	(0.026)	(0.032)
Summary index		-0.027	0.011	0.022	-0.001	0.015	0.024	0.016
		(0.042)	(0.032)	(0.030)	(0.030)	(0.046)	(0.039)	(0.041)

* p<0.10, ** p<0.05, *** p<0.01

Columns 1 reports means and standard deviations for the control group in the baseline and endline (the means are in the first row and the standard deviations are in the second row, in brackets). The following columns report the estimated treatment effects using OLS. All estimations include stratum fixed effects because assignment of treatment was within each stratum. Robust standard errors reported in the parentheses. Letters before the variable name indicate type of questionnaire from which variable was drawn. SC = school committee. P = parents. T = teachers. SP = school principal. S = student. OB = school-level observational questionnaire.

Table A9: School based management

	Pre/Post Mean and SD	Grant, G OLS	Election, E OLS	Linkage, L OLS	Training, T OLS	L+E OLS	L+T OLS	T+E OLS
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Panel A: Financial accountability of school management to parents and school committees								
SCrapbs	0.73/0.76	0.040	-0.043	-0.047	-0.020	-0.086	-0.071	-0.065
	[0.38/0.38]	(0.056)	(0.037)	(0.037)	(0.037)	(0.052)	(0.055)	(0.054)
SCrecrapbs	0.95/0.87	0.049	-0.002	0.005	-0.049*	0.006	-0.043	-0.061
	[0.22/0.34]	(0.046)	(0.027)	(0.026)	(0.029)	(0.038)	(0.044)	(0.047)
SCdistrapbs	0.79/0.72	-0.013	-0.058	0.023	-0.008	-0.022	0.008	-0.094
	[0.34/0.37]	(0.057)	(0.039)	(0.038)	(0.039)	(0.057)	(0.059)	(0.058)
SPinviterapbs	0.59/0.56	0.047*	-0.005	0.006	-0.014	0.007	-0.007	-0.018
	[0.17/0.15]	(0.024)	(0.018)	(0.019)	(0.018)	(0.025)	(0.025)	(0.026)
SPparentsrapbs	0.78/0.72	0.114**	-0.042	0.080**	-0.042	0.045	0.037	-0.066
	[0.32/0.36]	(0.051)	(0.034)	(0.034)	(0.035)	(0.046)	(0.050)	(0.047)
Pmtgrapbs	0.39/0.40	0.008	-0.002	-0.014	0.018	0.012	-0.006	0.001
	[0.38/0.38]	(0.057)	(0.040)	(0.041)	(0.041)	(0.056)	(0.053)	(0.059)
Prapbs	0.35/0.32	0.074*	-0.019	0.029	-0.029	0.022	0.003	-0.066
	[0.32/0.31]	(0.043)	(0.030)	(0.030)	(0.030)	(0.047)	(0.039)	(0.045)
Panel B: Principals' performance and management of teachers								
SPmeetteach	6.56/11.61	-0.243	-0.532	1.665***	0.185	1.155	1.687*	-0.732
	[3.65/4.62]	(0.760)	(0.627)	(0.593)	(0.714)	(0.860)	(0.876)	(0.894)
Tprincmeet	10.72/12.72	-1.875*	1.856**	0.988	-0.901	2.076**	0.191	0.332
	[3.45/8.72]	(1.045)	(0.760)	(0.674)	(0.717)	(0.939)	(0.930)	(1.004)
SPteacheval	0.77/0.77	0.007	-0.020	-0.004	-0.020	-0.035	-0.024	-0.045
	[0.26/0.25]	(0.038)	(0.027)	(0.027)	(0.027)	(0.034)	(0.036)	(0.041)
Tprinceval	0.72/0.73	-0.087	0.007	-0.037	0.044	-0.041	0.025	0.044
	[0.34/0.35]	(0.060)	(0.040)	(0.040)	(0.041)	(0.060)	(0.058)	(0.060)
Tprincipal	0.84/0.85	-0.020	-0.000	0.016	0.014	0.020	0.031*	0.013
	[0.11/0.10]	(0.021)	(0.013)	(0.013)	(0.013)	(0.020)	(0.017)	(0.020)
SPteachaward	0.26/0.24	-0.001	-0.008	0.028**	0.018	0.023	0.048***	0.010
	[0.13/0.12]	(0.020)	(0.011)	(0.012)	(0.011)	(0.016)	(0.016)	(0.017)
SPteachaccount	0.28/0.27	0.000	0.005	0.003	0.002	0.006	0.007	0.012
	[0.15/0.11]	(0.018)	(0.012)	(0.012)	(0.012)	(0.017)	(0.016)	(0.017)
Treward	0.03/0.02	0.027*	-0.004	-0.019**	0.001	-0.029*	-0.014	-0.003
	[0.07/0.07]	(0.014)	(0.009)	(0.010)	(0.009)	(0.015)	(0.014)	(0.012)
Taccount	0.03/0.04	0.021*	-0.005	-0.023***	0.004	-0.037***	-0.017	-0.002
	[0.08/0.10]	(0.013)	(0.009)	(0.009)	(0.008)	(0.013)	(0.011)	(0.010)
SCprinceffort	0.87/0.83	-0.029	0.015	-0.055	-0.034	-0.049	-0.083*	-0.021
	[0.28/0.28]	(0.045)	(0.034)	(0.034)	(0.035)	(0.047)	(0.044)	(0.049)
Summary index		0.055	-0.030	0.017	-0.018	-0.018	0.006	-0.068
		(0.058)	(0.035)	(0.035)	(0.036)	(0.050)	(0.050)	(0.054)

* p<0.10, ** p<0.05, *** p<0.01

Columns 1 reports means and standard deviations for the control group in the baseline and endline (the means are in the first row and the standard deviations are in the second row, in brackets). The following columns report the estimated treatment effects using OLS. All estimations include stratum fixed effects because assignment of treatment was within each stratum. Robust standard errors reported in the parentheses. Letters before the variable name indicate type of questionnaire from which variable was drawn. SC = school committee. P = parents. T = teachers. SP = school principal. S = student. OB = school-level observational questionnaire.

Table A10: Community level inputs to education

	Pre/Post Mean and SD (1)	Grant, G OLS (2)	Election, E OLS (3)	Linkage, L OLS (4)	Training, T OLS (5)	L+E OLS (6)	L+T OLS (7)	T+E OLS (8)
Panel A: Village councils' collaboration with schools and overall support for education in the village								
SCbpd	0.27/0.24	0.095	0.092	0.190***	0.045	0.303***	0.239***	0.085
	[0.45/0.43]	(0.078)	(0.060)	(0.058)	(0.060)	(0.081)	(0.080)	(0.085)
SCsatbpd	0.45/0.48	0.024	0.020	-0.038	0.025	-0.028	-0.008	0.032
	[0.25/0.22]	(0.041)	(0.026)	(0.026)	(0.026)	(0.037)	(0.035)	(0.034)
SPbpd	0.18/0.15	0.123*	0.008	0.281***	0.120**	0.304***	0.434***	0.126
	[0.39/0.36]	(0.072)	(0.060)	(0.056)	(0.059)	(0.082)	(0.071)	(0.079)
SPsatbpd	0.41/0.46	-0.049	0.026	0.066**	0.027	0.091**	0.103***	0.060
	[0.26/0.22]	(0.039)	(0.027)	(0.026)	(0.027)	(0.037)	(0.039)	(0.038)
Panel B: Community support for schools and school committees								
SCsatcomm	0.64/0.66	-0.009	-0.031	0.017	-0.003	-0.014	0.012	-0.032
	[0.13/0.15]	(0.028)	(0.020)	(0.019)	(0.019)	(0.026)	(0.025)	(0.025)
SCnonbpd	0.43/0.40	0.003	-0.028	0.003	-0.007	-0.019	-0.031	-0.049
	[0.50/0.49]	(0.088)	(0.060)	(0.060)	(0.060)	(0.085)	(0.080)	(0.085)
SCcomfundraise	0.55/0.26	-0.050	-0.275	0.195	-0.019	-0.154	0.138	-0.292
	[3.11/1.61]	(0.094)	(0.182)	(0.195)	(0.172)	(0.114)	(0.158)	(0.278)
SCcominkind	0.07/0.05	-0.025	-0.017	-0.002	0.013	-0.027	-0.000	-0.007
	[0.15/0.13]	(0.022)	(0.017)	(0.016)	(0.016)	(0.021)	(0.017)	(0.023)
SPsatcomm	0.59/0.60	-0.020	-0.030	0.006	0.004	-0.018	0.006	-0.029
	[0.15/0.13]	(0.026)	(0.022)	(0.022)	(0.022)	(0.032)	(0.036)	(0.030)
SPnonbpd	0.64/0.67	-0.047	0.063	0.004	0.115**	0.069	0.135*	0.133*
	[0.48/0.47]	(0.086)	(0.056)	(0.055)	(0.054)	(0.081)	(0.075)	(0.075)
Psatcomm	0.62/0.63	-0.002	-0.003	0.022**	0.017	0.020	0.043***	0.019
	[0.12/0.08]	(0.015)	(0.010)	(0.011)	(0.011)	(0.014)	(0.015)	(0.015)
Tsatcomm	0.58/0.55	0.023	0.009	-0.010	-0.001	-0.003	-0.015	0.015
	[0.16/0.19]	(0.033)	(0.023)	(0.022)	(0.022)	(0.034)	(0.032)	(0.031)
Summary index		0.008	-0.019	0.141***	0.095*	0.126*	0.237***	0.062
		(0.073)	(0.051)	(0.051)	(0.051)	(0.072)	(0.066)	(0.070)

* p<0.10, ** p<0.05, *** p<0.01

Columns 1 reports means and standard deviations for the control group in the baseline and endline (the means are in the first row and the standard deviations are in the second row, in brackets). The following columns report the estimated treatment effects using OLS. All estimations include stratum fixed effects because assignment of treatment was within each stratum. Robust standard errors reported in the parentheses. Letters before the variable name indicate type of questionnaire from which variable was drawn. SC = school committee. P = parents. T = teachers. SP = school principal. S = student. OB = school-level observational questionnaire.

Table A11: Training Modules

Module	Objectives	Duration
Community participation and school quality	Enable participants to: 1. Explain how community participation can improve school quality. 2. Explain the importance of eliminating the negative myths that prevented effective community participation. 3. Utilize the nine steps to evaluate the most effective forms and degrees of community participation for improving learning.	180 minutes
The role of the school committee	Enable participants to: 1. Explain the essence of the school committee. 2. Understand the objective, role, function and organizational structure of a school committee. 3. Understand the relationships between the school, school committee, and the district education council. 4. Identify concrete steps to empower the school committee.	180 minutes
School budgets and exploring local potentials	Enable participants to: 1. Analyze school problems and needs. 2. Identify and explore community potential. 3. Formulate the school budget. 4. Build collaboration networks to improve school quality. 5. Strengthen collaborations between stakeholders.	180 minutes
Sustaining community participation	Enable participants to: 1. Understand the urgency of sustaining community participation. 2. Choose and apply effective strategies in building and sustaining community participation. 3. Maintain and improve community trust of the school.	180 minutes
Active, joyful and effective learning (AJEL)	Enable participants to: 1. Analyze the weaknesses of conventional learning. 2. Identify the advantage of AJEL over conventional learning. 3. Identify and explore the potential of the school committee in supporting the implementation of AJEL.	195 minutes