The Impact of Maternal Literacy and Participation Programs: Evidence from a Randomized Evaluation in India

Online Appendices

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A Impact Heterogeneity

We use the following estimating equation to examine heterogeneity in treatment effects:

$$\begin{aligned} Y_{1iv} &= \beta_0 + \beta_1 Var_{iv} + \beta_2 ML_v + \beta_3 CHAMP_v + \beta_4 MLCHAMP_v + \beta_5 Var_{iv} * ML_v \\ &\quad + \beta_6 Var_{iv} * CHAMP_v + \beta_7 Var_{iv} * MLCHAMP_v + \beta_8 Y_{0iv} + \delta G_v + \pi H_{iv} + \varepsilon_{iv} \end{aligned}$$

In this equation, Var_{iv} is the interacted variable for individual i in village v, and the remainder of the variables are defined as in Equation (1).

A.1 Children

Table A10 examines heterogeneity in treatment effects on children's test scores. We examine heterogeneity by state, mother's baseline test score, mother's age, mother's education, child's age, child's baseline test score, and child's gender. Overall, there is little evidence of heterogeneity by any of these variables. Point estimates suggest approximately double the impact of ML and ML-CHAMP in Bihar, but neither interaction is statistically significant. The ML-CHAMP intervention had significantly larger impacts on older children, but there is no similar interaction with either of the individual interventions.

A.2 Mothers

Table A11 examines heterogeneity in treatment effects of the interventions on mothers' test scores. We focus on heterogeneity by the state where the intervention took place, the mother's baseline test score, mother's age, and mother's education level.

Consistent with the point estimates from the analysis of children's test scores, there is evidence that the ML and ML-CHAMP interventions were more effective in Bihar. The point estimates imply that these interventions resulted in more than double the impact on test scores in Bihar compared to Rajasthan, and the differences between the two states are significant at the 1 percent level for both interventions. The greater effectiveness of the ML and ML-CHAMP interventions in Bihar is consistent with the fact that mothers in the Bihar sample were 12 percentage points more likely to report having attended a class (see Appendix F).

We also find that the CHAMP intervention was significantly more effective for mothers with higher initial test scores and for mothers with some education. These results are consistent with the finding in Section IV.B that CHAMP impacts were spread across higher level skills, particularly in language. We also find that the CHAMP intervention was slightly more effective for younger

mothers.

B Location Selection

Because of the slightly different organization of the villages in Rajasthan and Bihar, a different procedure was used to select study hamlets in each state. The procedure focused on finding distinct hamlets in which the programs could run while limiting spillovers. Hamlet eligibility was therefore determined based on size and distance from other target hamlets. Size and location of hamlets were determined from "Rapid Rural Assessments" conducted in study blocks.

In Ajmer District in Rajasthan, villages are geographically separate, and each village is divided into several smaller hamlets. Hamlets met the size eligibility requirements if they contained between 40 and 100 households. To limit spillovers, one hamlet per village was selected. All villages in the blocks of Kekri and Bhinay were targeted for the intervention. To identify a total of 240 hamlets, the boundaries of Kekri and Bhinay were extended into a third block.

In Purnia District in Bihar, the village boundaries are less distinct, and villages are denser than in Rajasthan. As in Rajasthan, each village is comprised of smaller hamlets. All villages in the blocks of Dhamdaha and B. Kothi were targeted for the intervention. Within these villages, hamlets were considered eligible if they contained between 25 and 150 households.[1] To limit spillovers, hamlets in Bihar were selected only if they were 500 meters or more from of other selected hamlets.[2,3]

C Additional Analysis of Impacts by Age and Selection for Surveys

This appendix provides additional analysis by age group and selection for focus in the household surveys. The impacts are estimated running the regression Equation (1) including dummies for age

[1]The size criteria differed between Rajasthan and Bihar because the criteria for Rajasthan would not have produced a sufficient number of eligible hamlets were it applied in Bihar. Due to the higher upper bound on number of households, Pratham agreed to hold more than one class in a target hamlet where necessary in Bihar.

[2]GPS coordinates were used to confirm distances between hamlets. Distances were checked between hamlets within villages as well as across villages.

[3]In two cases, target hamlets were eliminated because Pratham determined that adult literacy rates were too high to sustain classes.

group and interacting these dummies with the treatment groups:

$$Y_{1iv} = \sum_{j=1}^{J} \beta_{1j} G_{ji} + \sum_{j=1}^{J} \beta_{2j} G_{ji} * ML + \sum_{j=1}^{J} \beta_{3j} G_{ji} * CHAMP + \sum_{j=1}^{J} \beta_{4j} G_{ji} * MLCHAMP + \beta_8 Y_{0iv} + \delta G_v + \pi H_{iv} + \varepsilon_{iv}$$

where G_{ji} is a dummy indicating child i's membership in group j. In this estimation, the coefficients β_{2j}, β_{3j}, and β_{4j} are interpretable as the impacts of the treatment within group j.

C.1 Children aged 5 to 8 vs. Other Children

As noted in Section I, we initially hypothesized that the impacts of the interventions would be most effective among children aged 5 to 8 at baseline. In addition, mothers in the CHAMP program were specifically instructed to do the CHAMP activities with the 5 to 8-year-old children in the household. Table A12 estimates separate impacts for the age groups of 3 to 4, 5 to 8, and 9 to 14.

In all three interventions, the impacts on the younger age group are small (typically 0.02 or less) and are not significant for any intervention or any test score category. The impacts on the 5 to 8 age group, on the other hand, are larger and mirror the results for the full sample in Table 4. Turning to the differences between the 5 to 8 age group and older children, the impacts are qualitatively similar for both groups in most cases. We note, however, that the testing sample only included older children in grades 1 to 4, and we thus cannot analyze impacts on all of the 9 to 14-year-old children in study households. The small sample size of the older group also results in relatively low power to test differences between the 5 to 8 age group and older children. We do observe a larger impact on math in the CHAMP intervention among the 5 to 8 age group compared with the older group, although the difference is not statistically significant. This could be due to the CHAMP program's specific focus on activities with children between 5 and 8.

C.2 Children Selected for Surveys vs. Other Children

As described in Section II, a number of questions in the household surveys focused on a single child aged 5 to 8 at baseline. When there was more than one child aged 5 to 8 in the household, one was randomly selected. In this subsection we analyze whether improvements in test scores may have arisen from this feature of the survey. We do this by comparing the randomly-selected child to other children aged 5 to 8, within households that had more than one child aged 5 to 8.[4]

[4]When we estimate impacts separately by age group for households with more than one 5 to 8-year old child (following the specification in Table A12), the pattern of impacts is similar to that of the full sample (not shown).

If the focus of the survey on one particular child shifted the mother's focus to that child during the interventions, we would expect larger impacts on selected children relative to other children in the same age group within these households.

Table A13 presents the disaggregated impacts. The table shows that for all three interventions, the randomly-selected children have qualitatively similar impacts to other children aged 5 to 8. In math, non-selected children have slightly larger impacts (0.053 vs 0.039 standard deviations for ML, 0.035 vs 0.031 for CHAMP, and 0.095 vs 0.053 for ML-CHAMP), but in no case can we reject that the impacts on the two groups are equal.

D Attrition

We analyze attrition across three samples: the mothers' survey sample (3.5 percent attrition), the mothers' testing sample (3.4 percent attrition), and the children's testing sample (6.0 percent attrition). Attrition of mothers was primarily driven by a failure to locate the entire household (typically because the household had moved). The additional attrition of children arose primarily because of logistical difficulties in testing several children per household during each visit and in finding all of the children present at home. Table A14 analyzes the levels of attrition across the three treatment groups. In the household survey and mothers' testing samples, there is no evidence of differential attrition. However, there is some evidence of differential attrition in the children's testing sample: children tested at baseline in the CHAMP and ML-CHAMP groups were about 2 percentage points more likely to exit the sample compared with the control group.

Appendix Tables 15 and 16 further analyze the characteristics of mothers and children who attrited across treatment groups. In Table A15, we regress mothers' attrition (defined as not completing either the endline survey or test) on baseline characteristics, treatment group dummies, and interactions between the treatment groups and baseline characteristics. These interactions indicate whether the characteristics of mothers who attrit are different across treatment groups. As shown in the table, there are few differences in the characteristics of those who attrit across treatment groups: the interactions are jointly significant at the 10 percent level in only one of the 21 regressions. Table A16 repeats the exercise for children. Again, the characteristics of children who attrit are largely balanced; however, children in each of the three treatment groups who attrited had significantly lower math and language test scores than those who attrited in the control group.

To evaluate the possible effects of attrition on validity of the estimates on children's test scores, Table A17 analyzes the balance of characteristics across treatment groups in the sample of children that was tested at endline. Unlike the randomization check in Table 1, this table uses child-level data to mirror the children's learning analysis sample in Table 3. Overall, the endline balance is similar to baseline: of the 21 variables analyzed, one is jointly significant across the three treatment

groups at the 10 percent level, one more is significant at the 5 percent level, and two more are significant at the 1 percent level. Critically, there is still no evidence of imbalance in any of the test score variables. Thus, even though there is some evidence of differential attrition in the child sample, balance in the analysis sample is generally maintained because of the low overall level of attrition.

We present two analyses to examine the robustness of the children's learning results to differential attrition. First, as presented previously in Table A4, inclusion of household-level controls in the children's learning regressions leaves the estimated program effects virtually unchanged. Second, we construct bounds around the children's learning estimates using Lee's (2009) trimming method. The estimation uses only the sample of children tested at baseline and thus follows the specification in Table A4, Panel B, Columns 3, 6, and 9. We trim the top or bottom test scores in the control, ML, and CHAMP groups such that the generated attrition rates in each group are equal to those of the ML-CHAMP group, in which we observe the highest level of attrition. We then regress endline test scores on dummies for treatment group, baseline test scores, and dummies for stratum. As shown in Table A18, the small absolute differences in attrition between treatment groups lead to relatively tight bounds. For example, the estimated effect size of the CHAMP treatment on math scores ranges from 0.033 to 0.051 standard deviations. For the ML-CHAMP intervention, the effect ranges from 0.052 to 0.072 standard deviations. There is thus little evidence that differential attrition substantially influences our estimated impacts on children's test scores.

E Spillovers of ML treatment in Bihar

As shown in Table 2, 7 percent of mothers in the control and CHAMP groups reported attending adult literacy classes. Almost all of these mothers were in the Bihar sample. In this appendix we analyze whether proximity to ML classes could drive spillovers to control and CHAMP mothers. As noted in the text and in Appendix B, treatments in Bihar were assigned by hamlet, which is a sub-unit of a larger village. In some cases, multiple hamlets in the same village were included in the study if they were at least 500 meters apart. Table A19 regresses knowledge of classes and take-up of control and CHAMP mothers on measures of proximity to ML and ML-CHAMP villages. As measures of proximity we use the number of ML and ML-CHAMP villages within 1km, the number of hamlets within the larger village, and indicators for at least one ML or ML-CHAMP village within 1km or in the larger village.

As shown in Panel A, nearby ML hamlets had little influence on knowledge of ML classes in the mother's village. We do find that having at least one ML or ML-CHAMP hamlet within 1km increased knowledge of classes in the village by 6.4 percentage points (significant at 10 percent), but the impacts of the number of nearby hamlets and the presence of ML in the larger village have

smaller and statistically insignificant effects. The small impact of a nearby ML and ML-CHAMP hamlet on knowledge of classes in the village in the one specification could be due to the survey's use of the word "village" and not "hamlet". This choice was made because hamlets are referred to using different Hindi words in Bihar and Rajasthan.

In Panel B we examine spillovers on mothers' self-reports of attendance. In all four specifications, we cannot reject the null hypothesis of no spillovers. The largest positive coefficient is in the specification using an indicator for a ML or ML-CHAMP hamlet within 1km, implying about 2.5 percentage points more attendance in those villages (p-value = 0.32). The confidence interval allows us to rule out effects above 7.4 percentage points, about half of the self-reported take-up in the control and CHAMP groups.

F Correlates of Participation in ML and CHAMP

In Table A20 we analyze the determinants of mothers' participation in ML classes and CHAMP sessions. We regress participation on a set of variables including household characteristics, mother education, children's schooling behavior, time spent working, prior experience with literacy classes, self-help group membership, baseline participation in children's education, and state.

Column 1 analyzes the determinants of any participation in ML using the survey-based measure, while Columns 2 and 3 use the Pratham administrative data to analyze any participation and the intensity of participation, respectively. The determinants of ML participation are broadly similar across survey-based and administrative measures, with the highest predictive power in the regression using the survey-based measure in Column 1.

Mothers' education has a non-monotonic relationship with attendance in ML classes: mothers were more likely to attend when they had some exposure to formal schooling, but more years of education made them less likely to attend. In addition, mothers who scored higher on the baseline test were significantly more likely to attend. Because the test covered only the most basic competencies, the test and schooling results are consistent in that mothers with a small amount of education were more likely to attend.[5] Participation in ML is also weakly related to the percentage of children in school at baseline.

Beyond mothers' and children's characteristics, experience meeting in groups is a strong predictor of attendance in the ML classes: members of self-help groups were 8 to 10 percentage points more likely to attend a class (both significant at the 1 percent level). Past experience with

[5]We note, however, that less than 10 percent of mothers have 1 to 5 years of education, the range over which average participation is predicted to be highest as per the specification in Column 1, while 85 percent of mothers have zero education. In addition, as shown in the heterogeneity analysis in Appendix A, impacts on mothers' learning were highest for mothers with zero education.

adult literacy classes also has a significant positive relationship with self-reported attendance and Pratham's measure of the percentage of classes attended.

Our survey data also show that mothers in Bihar had 12 percent higher take-up than those in Rajasthan. This mirrors Pratham and research staff observations that mothers were on average more motivated and had more time to attend in Bihar. This relationship is not reflected in either of our administrative measures of take-up, although it is supported by the larger impacts we observe on mothers' test scores in Bihar compared with Rajasthan (See Appendix A). This could reflect higher work hours in Rajasthan, where mothers reported working 43 percent more hours (73 hours per week compared with 51 hours in Bihar). However, conditional on state, there is no significant relationship between total hours worked and take-up.

Column 4 of Table A20 analyzes the determinants of intensity of participation in CHAMP. Because 99 percent of households were reached at least once in CHAMP, there is little variation on the extensive margin of participation, and we therefore focus on the percentage of classes attended.[6] Less educated mothers were slightly more likely to participate, with an additional year of education reducing the percentage of sessions attended by about 1 percentage point. Unlike ML, those with zero education were not significantly less likely to participate. Participation is also associated with higher children's test scores and a larger fraction of children aged 5 to 8 in school. This could be explained by a complementarity of the CHAMP material with the work that the children were doing in school. As with participation in ML, we find evidence that participation is related to self-help group membership, but unlike ML it is not significantly related to past experience with adult literacy classes.

G Surveyor Demand Effects

Although our main test score outcomes were based on tests conducted by our enumerators, our other outcomes are based on mothers' self-reports. Because we do not have independent verification of these responses, we cannot completely rule out surveyor demand effects. However, the pattern of effects we find is inconsistent with surveyor demand effects that would generate positive responses to the broad set of questions relating to education, or to only the questions that specifically relate to components of the ML or CHAMP programs.

First, the patterns of impacts do not suggest that the mothers in the intervention groups responded in uniformly favorable ways to the broad set of questions relating to education. Although the interventions did impact our summary indices of participation, empowerment, and education assets in the home, the impacts on the underlying components are not universally and strongly pos-

[6] Because our data do not include mother presence in all cases, our measure of the percentage of sessions attended includes all sessions conducted at the household.

itive, as would be the case if respondents exhibited surveyor demand effects for all topics relating to education. For example, the ML intervention, while influencing the overall participation index, did not have significant impacts on 5 of the 8 individual components of the index. In addition, as shown in Table A22, we see virtually no detectable impacts of any of the interventions on mothers' aspirations for child attainment.

A second possibility is that mothers were responding in ways that would be favorable to the specific components related to the programs in which they participated. Although we do observe larger impacts on some of these measures, this would be expected in the absence of surveyor demand effects. It is thus more challenging to separate surveyor demand effects from true program impacts. However, in this case we can also provide evidence inconsistent with systematic surveyor demand effects among these questions.

In the ML program, the three specific outcomes that most closely relate to the program come from the set of empowerment variables listed in Table A21: the questions "Do you consider yourself literate?" "Do you count your change?", and "Have you signed your name on official documents?" relate to skills taught in the classes, and we observe positive impacts on all three these outcomes. While it is not possible to fully verify the responses to these questions, we can check the report of signing one's name against the mother's ability to write her name in the endline test. Among mothers who were not able to write their name at endline, about 14 percent indicated they had signed their name on official documents. However, there is no significant difference in this "misreporting" between the villages where writing the mother's name was taught (ML and ML-CHAMP) and villages in which no such instruction was given (Control and CHAMP groups).

We also observe impacts from ML on a number of indicators that were not targeted by the program. For example, the ML program did not have a specific participation component, yet we do observe impacts on some of the participation measures, as well as the aggregate participation index.

For the CHAMP program, we again see evidence of impacts on components targeted by the programs, particularly the intensive margins of helping children with homework and looking at the child's notebook. However, there is no detectable impact on visiting the child's school, which was also covered in the program. Beyond the participation measures, we also observe impacts on a number of components that were not explicitly part of the program, particularly the presence of educational assets in the home.

H Additional Analysis of Empowerment

As indicated in Section IV.C, the main analysis of empowerment in Table 5 includes a subset of the indicators originally listed in the PAP. This change was made to focus on the indicators that

are most often used in the literature. In this section we discuss the impacts on the broader set of measures listed in the PAP. The impacts on these measures are analyzed in Table A21. As in the main empowerment analysis, we group these variables into categories of similar measures.

Beyond the household decision variables analyzed in the main text, our measures included 17 additional variables that could reflect the mothers' ability to make choices for themselves or their families.[7]

First, the "mobility and networks" group captures three measures of mothers' mobility outside of the home, as well as two measures of self-help group membership. Women's freedom of movement and access to external support networks reflect women's autonomy outside of the household and have been frequently used in quantitative studies of empowerment (Malhotra et al., 2002).

Second, the "capability" group captures seven measures of self-reported literacy, having signed her name on official documents, counting change during purchases, knowledge of the National Rural Employment Guarantee Scheme wage, and involvement in self-help group savings. This type of measure has also been referred to as "resources" that enable empowerment (Kabeer, 2009). Nonetheless, these measures have been seldom used as direct measures of empowerment in micro-scale quantitative work (Malhotra et al., 2002). We also note that these measures reflect life skills that could most directly be influenced by the programs.

Third, our measures also include a set of beliefs and attitudes about girls' and women's education. These measures reflect views on social norms regarding women and are sometimes used in broad measures of empowerment (Pitt et al., 2006). Finally, we include one measure of self-reported happiness. Psychological well-being has been cited as a dimension of empowerment in the literature, but it is not typically analyzed in quantitative studies of empowerment (Malhotra et al., 2002).

Table A21 presents impacts on these 17 variables, aggregated into 4 sub-indices based on the groups described above. The top row of the table aggregates these measures with the 9 decisions variables from Section IV.C to create a broad empowerment index as per the PAP. Using this broader measure, we find significant impacts of ML of 0.071 standard deviations (significant at the 5 percent level) and ML-CHAMP of 0.14 standard deviations (significant at the 1 percent level).[8] These impacts are larger than those on an index created using only the indicators of mothers'

[7] We exclude two measures listed in the PAP. The PAP includes one variable indicating whether the mother worked under the National Rural Employment Guarantee Scheme and one variable indicating whether she took advantage of other entitlements. The survey measured whether *anyone* in the household took advantage of these entitlements, and thus does not accurately measure empowerment of the mother. There were no significant impacts of the interventions on either of these measures (not shown).

[8] When we split the index by when the components appear on the survey, find larger impacts on an index constructed from the first 13 empowerment questions, compared with an index constructed from the last 13 questions (not shown). Although the difference in impacts could be driven by differences in the types of questions at different points in the survey, it is consistent with the possibility that the length of the survey could have decreased measured impacts.

involvement in household decisions analyzed in Section IV.C.

The larger impacts on the broader empowerment index are driven by the measures of capability and beliefs and attitudes. Both ML and ML-CHAMP had significant impacts on the capability sub-index. As some of the capabilities were directly related to ML program content (e.g., signing one's name), they also demonstrate the women putting these skills into practice to participate in the marketplace. All three interventions also had significant impacts on the beliefs and attitudes sub-index, implying that both ML and CHAMP increased mother's beliefs about the value of female education. We do not find significant impacts of any of the interventions on mobility and networks or on happiness.

I Mothers' Perceptions and Aspirations

In Table A22 we present impacts on a set of indicators that reflect mothers' perceptions of parental involvement in education, aspirations for their children, and perceptions of their children's reading and math ability. As shown in Panel A, the interventions had significant impacts on several measures of mothers' perceptions of parental involvement. All three interventions significantly increased the mother's belief that she should be involved in her child's education. Through open-ended questions, we also counted the number of educational activities for which mothers perceived parents to be responsible and the number of activities the mother identified that she could do to help her child improve his or her studies.[9] Mothers in the ML-CHAMP intervention identified more educational responsibilities of parents (significant at the 5 percent level), and the ML and ML-CHAMP treatment groups had significant impacts on the number of specific activities mothers identified they could do to help their children (significant at the 10 and 5 percent levels, respectively).

By contrast, as shown in Panel B, we find we find little evidence that the programs influenced expectations and aspirations for child educational attainment. Across the four measures examined, the only significant impact is an increase of 0.25 years in the mother's aspiration for her child's grade attainment resulting from the ML-CHAMP intervention (significant at the 5 percent level).

Panel C of Table A22 examines mothers' perceptions of child language and math ability. Perceptions were based on integer scales of 0 to 4, corresponding to five levels of the ASER language and math tests. We find that the CHAMP and ML-CHAMP interventions significantly increased mothers' perceptions of her child's language and math scores. When compared to the child's actual ability, however, the CHAMP and ML-CHAMP interventions caused mothers to be overly optimistic: both interventions increased the differences (in absolute value) between mothers' per-

[9]For both questions, the lists of activities were known to the surveyor, but not shared with mothers. If a mother included the activity in her response, the surveyor checked it off from that list.

ceptions and measured child ability in language and math. Our initial hypothesis was that through additional involvement, these interventions would *increase* the accuracy of the perception, and thus these results are surprising.[10] One possible explanation for this result is that treated mothers overestimated the impacts of their involvement on their children's learning.

[10] In contrast, Dizon-Ross (2016) finds that providing information on child ability to parents in Malawi increases the accuracy of their beliefs and increases investment in level-appropriate educational materials.

References in Appendices

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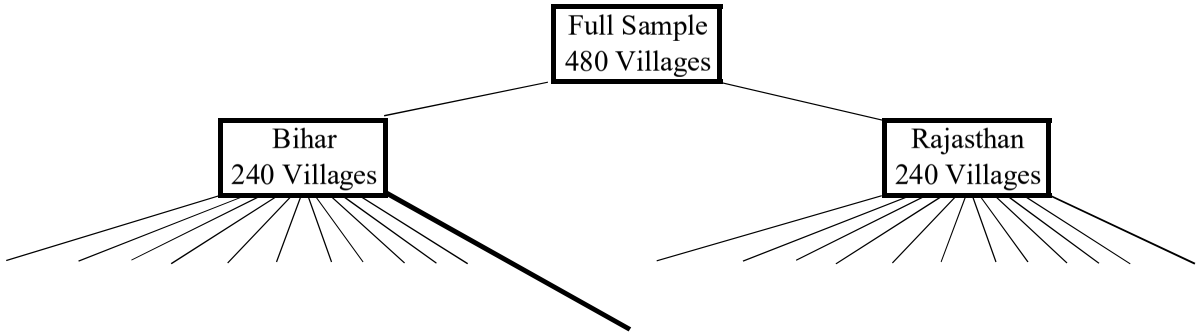
Figure A1: Stratification of Treatment Assignment



Set (20 villages)		
	ML	No ML
CHAMP	5	5
No CHAMP	5	5

Phase 1 (10 villages)		
	No ML	ML
No CHAMP	3	2
CHAMP	2	3

Phase 2 (10 Villages)		
	No ML	ML
No CHAMP	2	3
CHAMP	3	2

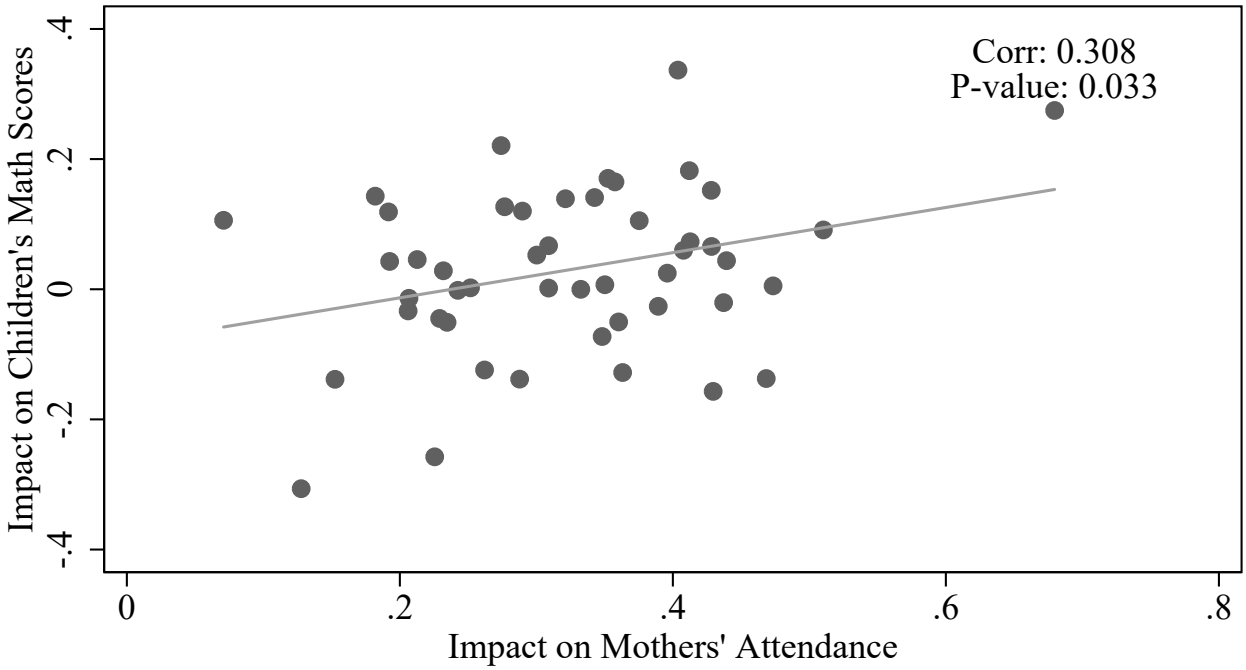
-OR-

Phase 1 (10 villages)		
	No ML	ML
No CHAMP	2	3
CHAMP	3	2

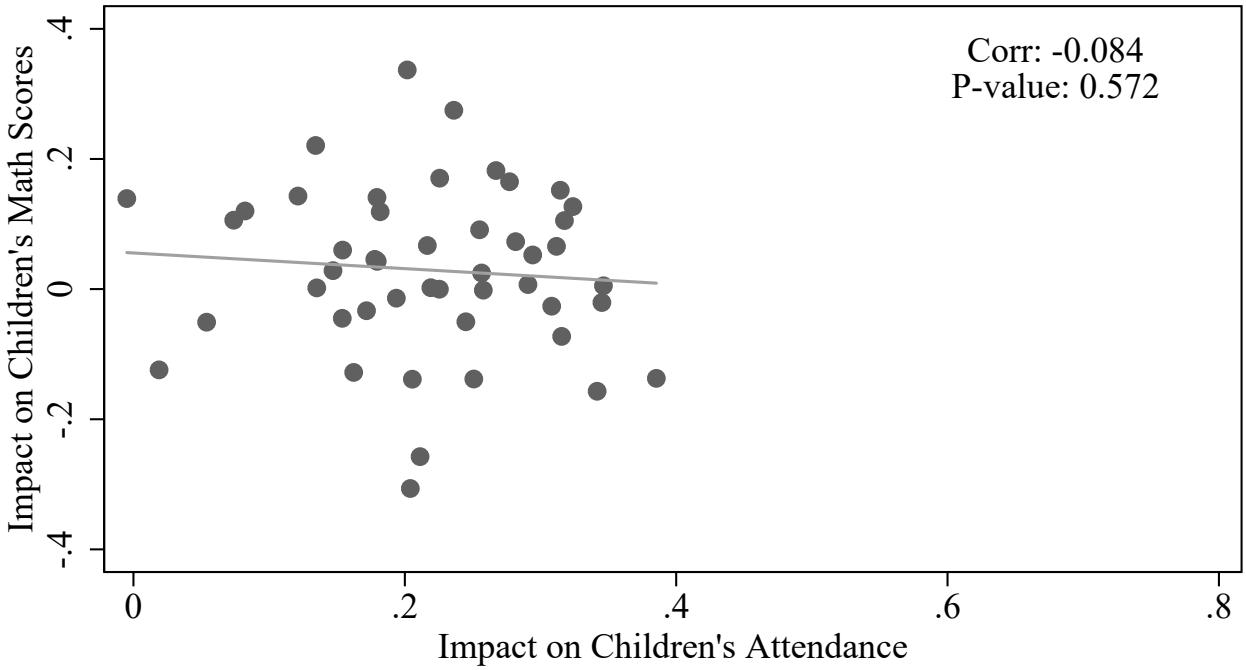
Phase 2 (10 Villages)		
	No ML	ML
No CHAMP	3	2
CHAMP	2	3

Figure A2:
ML Impacts on Children's Math Scores vs. ML Impacts on Attendance, by Stratum

Panel A. Children's Math Impact vs. Mothers' Attendance Impact



Panel B. Children's Math Impact vs. Children's Attendance Impact



Notes: Each data point represents the impact of the ML treatment on child math scores within a stratum, graphed against the impact of ML on either mothers' or children's attendance within that stratum. Attendance is measured through household surveys.

Table A1: Comparison of State, District, and Block Characteristics

		Rajasthan (Rural)				Bihar (Rural)			
	India (Rural)	State	Ajmer District	Intervention Blocks	Evaluation Data	State	Purnia District	Intervention Blocks	Evaluation Data
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Household size	4.94	5.42	5.27	5.04	6.75	5.48	5.03	5.12	6.53
Household has electricity	55.3	58.3	71.3	60.2	80.8	10.4	8.10	7.64	15.4
Household Asset Ownership									
Radio	17.3	13.9	15.6	10.8	11.5	25.8	19.2	26.6	22.2
Television	33.4	25.6	32.1	25.2	36.5	10.2	6.10	7.59	8.56
Mobile phone	51.2	64.4	66.4	61.5	86.8	51.4	36.6	37.5	57.9
Bicycle	46.2	24.2	35.3	36.5	56.3	48.8	44.8	46.2	59.5
Motorcycle / moped	14.3	17.3	25	21.4	43.0	6.59	4.60	4.87	5.14
Literate - aged 7 and over	67.8	61.4	59.1	55.3	–	59.8	48.4	54.2	–
Literate - females, aged 7 and over	57.9	45.8	41.3	36.7	–	49.0	39.3	45.2	–
In school - aged 6-14	96.7	95.5	91.1	–	82.2	97	93.3	–	82.6
Can read first grade text - grades 3-5	57.5	52.7	51.9	–	–	52.1	41.1	–	–

Notes: This table displays mean values from the 2011 Census of India and 2011 ASER survey (Columns 1-4 and 6-8), compared with data from the evaluation (Columns 5 and 9). Children's schooling and reading data come from the 2011 ASER survey, and the remainder come from the 2011 Census of India. Except for household size, all values are displayed as percentages. In the evaluation data, the percentage of children in school was calculated from the endline data for control group children aged 5 to 13 at baseline.

Table A2: Robustness of ML-CHAMP Impacts

	Impact of Treatment at Endline			
	No Controls	Baseline Only	All Controls	Significant Controls
	(1)	(2)	(3)	(4)
Outcome				
Child's language score	0.0620	0.0456***	0.0424***	0.0458***
	(0.0378)	(0.0164)	(0.0144)	(0.0161)
Child's math score	0.0695*	0.0617***	0.0558***	0.0629***
	(0.0361)	(0.0174)	(0.0152)	(0.0169)
Child's total score	0.0685*	0.0557***	0.0515***	0.0565***
	(0.0372)	(0.0159)	(0.0137)	(0.0154)
Mother's language score	0.113**	0.0932***	0.0881***	0.0888***
	(0.0464)	(0.0142)	(0.0130)	(0.0145)
Mother's math score	0.171***	0.151***	0.150***	0.149***
	(0.0481)	(0.0173)	(0.0163)	(0.0177)
Mother's total score	0.148***	0.127***	0.124***	0.123***
	(0.0481)	(0.0140)	(0.0130)	(0.0142)
Decisions Index	0.0698*	0.0698*	0.0906***	0.0884**
	(0.0373)	(0.0373)	(0.0347)	(0.0361)
Participation Index	0.130***	0.108***	0.106***	0.114***
	(0.0431)	(0.0360)	(0.0329)	(0.0364)
Education Asset Index	0.118***	0.115***	0.0895***	0.0954**
	(0.0418)	(0.0371)	(0.0323)	(0.0373)

Notes: Standard errors in parentheses. This table presents impact estimates of the ML-CHAMP treatment using varying sets of control variables. All specifications include dummy variables for the ML and CHAMP treatment groups. Column 1 controls only for stratum dummies. Column 2 controls for stratum dummies and the baseline value of the outcome variable (where measured). Column 3 controls for stratum, the baseline value of the outcome variable, and all controls listed in Table 1. For mother-level outcomes, child-level variables are averaged within the household. Column 4 displays impact estimates controlling for stratum, the baseline value of the outcome variable, and controls listed in Table 1 as significantly different at the 10 percent level between the ML-CHAMP and control groups. This includes an indicator for farming as the main source of household income, the number of children 0-4 in the household, the number of children 9-14 in the household, the number of adults in the household, the mother's past experience with adult literacy classes, and child gender. Missing values of control variables are coded as 0, with additional dummies indicating missing values. Test score variables are described in Tables 3 and 4. The Decisions Index, Participation Index, and Education Asset Index are defined in Tables 5, 6, and 8, respectively. Standard errors are clustered at the village level. * denotes significance at 0.10; ** at 0.05; *** at 0.01.

Table A3: Randomization Check: Differences Between Treatments

		Differences			
	Mean Control	ML -CHAMP	ML-CHAMP -ML	ML-CHAMP -CHAMP	N
	(1)	(2)	(3)	(4)	(5)
Panel A. Household-level Variables					
First principal component of durables ownership	-0.0341 [2.25]	-0.0866 (0.0902)	-0.0233 (0.0881)	0.0633 (0.0968)	8888
Main source of income: farming	0.494 [0.500]	0.00575 (0.0227)	-0.0389* (0.0206)	-0.0447* (0.0228)	8885
Number of children 0-4	0.929 [0.900]	-0.0291 (0.0322)	-0.0787*** (0.0290)	-0.0496 (0.0327)	8888
Number of children 5-8	1.44 [0.602]	-0.00350 (0.0187)	-0.0161 (0.0178)	-0.0126 (0.0194)	8888
Number of children 9-14	0.976 [0.936]	0.0278 (0.0316)	0.00111 (0.0296)	-0.0267 (0.0306)	8888
Number of children 15-17	0.265 [0.500]	0.000498 (0.0154)	0.0107 (0.0155)	0.0102 (0.0159)	8888
Number of adults 18 and over	2.91 [1.50]	-0.101 (0.0623)	-0.0912 (0.0577)	0.00956 (0.0617)	8888
Fraction of household 15 and over that can read	0.389 [0.426]	-0.0326* (0.0192)	-0.0226 (0.0191)	0.0100 (0.0206)	7576
Fraction of household 15 and over that can do math	0.246 [0.376]	-0.0243 (0.0177)	-0.0213 (0.0162)	0.00298 (0.0189)	7579
Mother's education (years)	0.764 [2.28]	-0.105 (0.112)	-0.0219 (0.103)	0.0829 (0.120)	8864
Father's education (years)	3.88 [4.44]	-0.283 (0.220)	-0.384* (0.212)	-0.101 (0.236)	8181
Mother's age	32.3 [7.10]	-0.0599 (0.248)	-0.0204 (0.229)	0.0395 (0.251)	8888
Mother has past experience with literacy classes	0.117 [0.321]	-0.000138 (0.0116)	0.0125 (0.0110)	0.0127 (0.0118)	8635
Mother's language score (fraction)	0.299 [0.247]	-0.00899 (0.0128)	-0.00106 (0.0117)	0.00793 (0.0137)	8857
Mother's math score (fraction)	0.215 [0.241]	-0.00416 (0.0128)	0.000407 (0.0119)	0.00457 (0.0137)	8857
Mother's total score (fraction)	0.250 [0.234]	-0.00617 (0.0126)	-0.000203 (0.0116)	0.00597 (0.0136)	8857
Panel B. Child-level Variables					
Child is male	0.520 [0.500]	-0.00544 (0.0107)	0.00802 (0.0104)	0.0135 (0.0107)	15502
Child attends school / aanganwadi	0.922 [0.269]	-0.00906 (0.00833)	-0.0120 (0.00952)	-0.00290 (0.00903)	15043

Table A3: Randomization Check: Differences Between Treatments (continued)

		Differences			
	Mean Control	ML -CHAMP	ML-CHAMP -ML	ML-CHAMP -CHAMP	N
	(1)	(2)	(3)	(4)	(5)
Child's language score	0.350	-0.00158	-0.00276	-0.00118	15502
(fraction)	[0.296]	(0.0113)	(0.0110)	(0.0114)	
Child's math score	0.277	-0.00163	0.00288	0.00451	15502
(fraction)	[0.303]	(0.0115)	(0.0109)	(0.0116)	
Child's total score	0.310	-0.00161	0.000372	0.00198	15502
(fraction)	[0.291]	(0.0112)	(0.0107)	(0.0113)	

Notes: Standard deviations in square brackets, standard errors in parentheses. Columns 2, 3, and 4 display the differences in means between the treatment groups indicated. Differences in means are computed by OLS regression, controlling for stratum dummies. See Table 1 notes for variable definitions and notes on observation counts. Standard errors are clustered at the village level. * denotes significance at 0.10; ** at 0.05; *** at 0.01.

Table A4: Children's and Mothers' Test Scores, Alternative Specifications

	Impact of Treatment at Endline								
	ML			CHAMP			ML-CHAMP		
	Main	Limited Controls	Missing Baseline	Main	Limited Controls	Missing Baseline	Main	Limited Controls	Missing Baseline
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Panel A. Children									
Language	-0.00684	-0.00725	-0.0142	0.0118	0.0205	0.00976	0.0424***	0.0460***	0.0472***
	(0.0158)	(0.0170)	(0.0184)	(0.0146)	(0.0174)	(0.0178)	(0.0144)	(0.0163)	(0.0173)
Math	0.0351**	0.0346**	0.0364*	0.0321**	0.0430**	0.0417**	0.0558***	0.0598***	0.0624***
	(0.0162)	(0.0176)	(0.0191)	(0.0155)	(0.0177)	(0.0185)	(0.0152)	(0.0172)	(0.0182)
Total	0.0166	0.0162	0.0139	0.0237*	0.0340**	0.0282	0.0515***	0.0555***	0.0575***
	(0.0150)	(0.0165)	(0.0174)	(0.0142)	(0.0170)	(0.0171)	(0.0137)	(0.0159)	(0.0164)
Panel B. Mothers									
Language	0.0660***	0.0680***	–	0.0231*	0.0297**	–	0.0881***	0.0925***	–
	(0.0125)	(0.0137)		(0.0118)	(0.0139)		(0.0130)	(0.0141)	
Math	0.117***	0.117***	–	0.0592***	0.0628***	–	0.150***	0.150***	–
	(0.0160)	(0.0164)		(0.0147)	(0.0152)		(0.0163)	(0.0167)	
Total	0.0955***	0.0968***	–	0.0432***	0.0485***	–	0.124***	0.127***	–
	(0.0124)	(0.0132)		(0.0113)	(0.0126)		(0.0130)	(0.0137)	

Notes: Standard errors in parentheses. Columns 1, 4, and 7 display estimated coefficients from Tables 3 and 4 for Panels A and B, respectively. Columns 2, 5, and 8 use the same specifications as in Tables 3 and 4, controlling only for baseline test scores. Panel A, Columns 3, 6, and 9 use the same specification as in Table 3, controlling only for baseline test scores, and including only the sample of children tested at baseline. * denotes significance at 0.10; ** at 0.05; *** at 0.01.

Table A5: Treatment Effects on Children's ASER Learning Levels

	Endline Mean	Impact of Treatment at Endline			
	Control	ML	CHAMP	ML-CHAMP	N
	(1)	(2)	(3)	(4)	(5)
Panel A. Language					
Read letters	0.389	0.000319	0.00656	0.0262***	18283
	[0.430]	(0.00813)	(0.00783)	(0.00794)	
Read words	0.176	-0.00322	0.00183	0.00800	18283
	[0.353]	(0.00606)	(0.00556)	(0.00562)	
Read paragraph	0.118	-0.00394	-0.00266	0.00872*	18283
	[0.322]	(0.00541)	(0.00503)	(0.00481)	
Read story	0.0751	0.000972	0.00299	0.00570	18283
	[0.264]	(0.00568)	(0.00535)	(0.00539)	
Panel B. Math					
One-digit number recognition	0.562	0.0189**	0.0296***	0.0352***	18283
	[0.474]	(0.00777)	(0.00786)	(0.00777)	
Two-digit number recognition	0.201	-0.000173	-0.00237	0.00269	18283
	[0.368]	(0.00604)	(0.00582)	(0.00581)	
Two-digit addition	0.198	0.0203**	0.00242	0.00713	18283
	[0.399]	(0.00812)	(0.00731)	(0.00735)	
Two-digit subtraction	0.0579	0.0106**	-0.00504	0.00289	18283
	[0.234]	(0.00516)	(0.00499)	(0.00468)	

Notes: Standard deviations in square brackets, standard errors in parentheses. Columns 2, 3, and 4 display estimated coefficients of a regression of the outcome in each row on treatment group dummies, controlling for stratum dummies, baseline values (where available), and all variables in Table 1. Missing values of control variables are coded as 0, with additional dummies indicating missing values. Standard errors are clustered at the village level. * denotes significance at 0.10; ** at 0.05; *** at 0.01.

Table A6: Treatment Effects on Mothers' ASER Learning Levels

	Endline Mean	Impact of Treatment at Endline			
	Control	ML	CHAMP	ML-CHAMP	N
	(1)	(2)	(3)	(4)	(5)
Panel A. Language					
Read letters	0.173	0.0355***	0.00927*	0.0471***	8580
	[0.339]	(0.00555)	(0.00496)	(0.00591)	
Read words	0.0924	0.00526	0.00995**	0.0111***	8580
	[0.278]	(0.00385)	(0.00387)	(0.00395)	
Read paragraph	0.0776	0.00196	0.00561	0.00165	8580
	[0.268]	(0.00391)	(0.00412)	(0.00384)	
Read story	0.0622	0.000562	0.00343	0.00106	8580
	[0.242]	(0.00455)	(0.00445)	(0.00435)	
Panel B. Math					
One-digit number recognition	0.470	0.0677***	0.0277***	0.107***	8580
	[0.461]	(0.0101)	(0.00968)	(0.0108)	
Two-digit number recognition	0.0960	0.0150***	0.00824**	0.0155***	8580
	[0.275]	(0.00399)	(0.00397)	(0.00393)	
Two-digit addition	0.0781	0.00496	0.00783	0.0151***	8580
	[0.268]	(0.00474)	(0.00511)	(0.00504)	
Two-digit subtraction	0.0355	0.00626	0.00671	-0.00200	8580
	[0.185]	(0.00409)	(0.00450)	(0.00394)	

Notes: Standard deviations in square brackets, standard errors in parentheses. Columns 2, 3, and 4 display estimated coefficients of a regression of the outcome in each row on treatment group dummies, controlling for stratum dummies, baseline values (where available), and all variables in Table 1, using household-level averages for child-level variables. Missing values of control variables are coded as 0, with additional dummies indicating missing values. Standard errors are clustered at the village level. * denotes significance at 0.10; ** at 0.05; *** at 0.01.

Table A7: Mothers' Weekly Time Use, PAP Categories

	Endline Mean	Impact of Treatment at Endline			
	Control	ML	CHAMP	ML-CHAMP	N
	(1)	(2)	(3)	(4)	(5)
Help children with homework	2.31	0.0935	0.109	0.0648	8533
	[2.70]	(0.0899)	(0.0931)	(0.0894)	
Read with children	0.320	-0.00389	-0.0377	-0.00477	8454
	[1.37]	(0.0391)	(0.0356)	(0.0401)	
Play with children	1.33	0.107	0.0614	-0.0280	8551
	[3.29]	(0.113)	(0.118)	(0.107)	
Share stories with children	0.497	0.0324	-0.0196	0.0240	8536
	[1.42]	(0.0457)	(0.0425)	(0.0503)	
Paid / agricultural work	31.1	0.936	0.548	0.962	8561
	[21.1]	(0.600)	(0.581)	(0.598)	
Livestock work	9.66	0.116	-0.338	0.473*	8576
	[7.04]	(0.252)	(0.231)	(0.251)	
Collect animal feed	6.96	0.182	-0.240	0.187	8577
	[6.77]	(0.249)	(0.245)	(0.270)	
Collect wood	3.28	0.123	-0.0370	0.146	8570
	[5.10]	(0.165)	(0.177)	(0.174)	
Housework	19.0	0.262	0.113	0.246	8581
	[8.01]	(0.299)	(0.297)	(0.288)	
Buy household supplies	1.20	-0.0763	-0.0536	0.0238	8572
	[2.84]	(0.0913)	(0.0931)	(0.0897)	
Look after children	4.65	-0.174*	-0.125	0.114	8581
	[3.68]	(0.105)	(0.107)	(0.104)	

Notes: Standard deviations in square brackets, standard errors in parentheses. Columns 2, 3, and 4 display estimated coefficients of a regression of the outcome in each row on treatment group dummies, controlling for stratum dummies, baseline values (where available), and all variables in Table 1, using household-level averages for child-level variables. Missing values of control variables are coded as 0, with additional dummies indicating missing values. Time spent in each activity measured in hours per week. Standard errors are clustered at the village level. * denotes significance at 0.10; ** at 0.05; *** at 0.01.

Table A8: Children's Weekly Time Use, PAP Categories

	Endline Mean	Impact of Treatment at Endline			
	Control	ML	CHAMP	ML-CHAMP	N
	(1)	(2)	(3)	(4)	(5)
Homework	3.80	-0.0818	0.114	0.166	8404
	[4.31]	(0.132)	(0.127)	(0.125)	
Read	0.450	-0.0627	-0.0360	0.0309	8156
	[1.56]	(0.0461)	(0.0498)	(0.0497)	
Draw / paint	0.685	0.00962	0.0487	0.0757	8153
	[1.56]	(0.0500)	(0.0492)	(0.0514)	
Play with adult	0.542	0.0166	-0.0349	-0.108*	8405
	[1.98]	(0.0650)	(0.0646)	(0.0612)	
Tuition classes	2.27	0.206	0.110	0.00580	8466
	[4.91]	(0.179)	(0.195)	(0.171)	
Television	3.70	-0.128	0.0840	0.0119	8414
	[5.07]	(0.166)	(0.170)	(0.163)	
Housework	3.60	0.0607	0.141	0.160	8449
	[4.11]	(0.132)	(0.129)	(0.132)	
Household business	1.89	0.198	0.0495	0.305**	8447
	[4.15]	(0.135)	(0.131)	(0.137)	

Notes: Standard deviations in square brackets, standard errors in parentheses. Columns 2, 3, and 4 display estimated coefficients of a regression of the outcome in each row on treatment group dummies, controlling for stratum dummies, baseline values (where available), and all variables listed in Table 1. Missing values of control variables are coded as 0, with additional dummies indicating missing values. Children's time use measured for one randomly selected child per household aged 5 to 8 at baseline. Time spent in each activity measured in hours per week. Standard errors are clustered at the village level. * denotes significance at 0.10; ** at 0.05; *** at 0.01.

Table A9: Cost Effectiveness of Interventions

	Intervention		
	ML	CHAMP	ML-CHAMP
	(1)	(2)	(3)
Panel A. Cost Summary ($)			
Pratham staff	37,521	30,699	68,219
Volunteer time	21,653	–	21,653
Training, monitoring, materials	14,861	4,730	19,590
Total	74,035	35,429	109,462
Panel B: Standard Deviation Improvement Per $100 Spent: Children			
Language	–	–	0.18
Math	0.22	0.40	0.24
Total	–	0.30	0.22
Children affected	4,572	4,448	4,653
Panel C: Standard Deviation Improvement Per $100 Spent: Mothers			
Language	0.19	0.14	0.17
Math	0.34	0.35	0.29
Total	0.28	0.26	0.24
Mothers affected	2,176	2,115	2,151

Notes: Costs incurred in rupees converted to dollars using 2011 exchange rate of 46.7 rupees/dollar. Volunteer time estimated based on average daily wage in non-agricultural occupations. Mothers and children affected calculated using the same inclusion criteria as Tables 3 and 4, respectively. Cost-effectiveness estimates in Panels B and C are computed based on the effect sizes reported in Tables 3 and 4, multiplied by the number of mothers or children affected, and divided by the total costs of each program in 100s of dollars. Cost-effectiveness is only calculated for effects significant at the 10 percent level.

Table A10: Impact Heterogeneity: Children's Total Test Scores

	Impact of Treatment at Endline						
	ML	CHAMP	ML-CHAMP	Variable * ML	Variable * CHAMP	Variable * ML-CHAMP	N
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
State = Bihar	0.0118	0.0180	0.0339*	0.00898	0.0106	0.0324	18283
	(0.0216)	(0.0207)	(0.0196)	(0.0298)	(0.0283)	(0.0267)	
Mother's baseline test score	0.0169	0.0225	0.0520***	0.0114	0.0113	0.0194	18221
	(0.0151)	(0.0143)	(0.0137)	(0.0129)	(0.0129)	(0.0131)	
Mother's age	-0.0680	-0.0157	0.0348	0.00263*	0.00122	0.000516	18283
	(0.0520)	(0.0512)	(0.0541)	(0.00156)	(0.00150)	(0.00158)	
Mother's education > 0	0.0111	0.0195	0.0461***	0.0439	0.0326	0.0363	18235
	(0.0155)	(0.0144)	(0.0140)	(0.0386)	(0.0366)	(0.0383)	
Child's age	0.0187	0.0130	0.00181	-0.000233	0.00179	0.00796*	18282
	(0.0258)	(0.0269)	(0.0258)	(0.00430)	(0.00432)	(0.00418)	
Child's baseline test score	0.0153	0.0203	0.0548***	0.0107	0.00148	-0.00371	14576
	(0.0166)	(0.0155)	(0.0152)	(0.0137)	(0.0136)	(0.0127)	
Child is male	0.0128	0.0368**	0.0467***	0.00753	-0.0257	0.00971	18283
	(0.0183)	(0.0176)	(0.0171)	(0.0199)	(0.0202)	(0.0200)	

Notes: Standard errors in parentheses. Each column displays the results of a regression of the child's normalized total test score on treatment dummies, the interaction variable indicated, and interactions of the variable and treatment dummies. Regressions include all control variables used in Table 3. Mother's and child's test scores are the mother's and child's total normalized test scores. Standard errors are clustered at the village level. * denotes significance at 0.10; ** at 0.05; *** at 0.01.

Table A11: Impact Heterogeneity: Mother's Total Test Scores

	Impact of Treatment at Endline						
	ML	CHAMP	ML-CHAMP	Variable * ML	Variable * CHAMP	Variable * ML-CHAMP	N
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
State = Bihar	0.0581***	0.0602***	0.0810***	0.0729***	-0.0342	0.0864***	8580
	(0.0147)	(0.0144)	(0.0162)	(0.0243)	(0.0212)	(0.0254)	
Mother's baseline test score	0.0955***	0.0425***	0.125***	-0.00459	0.0321**	-0.00771	8552
	(0.0123)	(0.0109)	(0.0129)	(0.0143)	(0.0129)	(0.0136)	
Mother's age	0.0806*	0.145***	0.156***	0.000468	-0.00315**	-0.000983	8580
	(0.0451)	(0.0464)	(0.0472)	(0.00131)	(0.00133)	(0.00137)	
Mother's education > 0	0.0975***	0.0314***	0.131***	-0.0222	0.0725*	-0.0439	8556
	(0.0127)	(0.0113)	(0.0131)	(0.0430)	(0.0384)	(0.0416)	

Notes: Standard errors in parentheses. Each column displays the results of a regression of the mother's normalized total test score on treatment dummies, the interaction variable indicated, and interactions of the variable and treatment dummies. Regressions include all control variables used in Table 4. Mother's test score is the mother's total normalized test score. Standard errors are clustered at the village level. * denotes significance at 0.10; ** at 0.05; *** at 0.01.

Table A12: Children's Test Scores by Age Group

	Impact of Treatment at Endline					
	All Children	3-4 Year Old Children	5-8 Year Old Children	9-14 Year Old Children	Difference: 5-8 vs. 3-4	Difference: 5-8 vs 9-14
	(1)	(2)	(3)	(4)	(5)	(6)
Panel A. ML						
Language	-0.00684	-0.00295	-0.00765	-0.0203	-0.00470	0.0126
	(0.0158)	(0.0158)	(0.0202)	(0.0377)	(0.0236)	(0.0393)
Math	0.0351**	0.0151	0.0385*	0.0453	0.0234	-0.00682
	(0.0162)	(0.0159)	(0.0210)	(0.0405)	(0.0234)	(0.0422)
Total	0.0166	0.00717	0.0182	0.0161	0.0110	0.00211
	(0.0150)	(0.0147)	(0.0194)	(0.0344)	(0.0215)	(0.0361)
Panel B: CHAMP						
Language	0.0118	0.0130	0.00679	0.0360	-0.00624	-0.0292
	(0.0146)	(0.0169)	(0.0190)	(0.0370)	(0.0239)	(0.0393)
Math	0.0321**	0.00664	0.0463**	0.00769	0.0397*	0.0386
	(0.0155)	(0.0155)	(0.0204)	(0.0390)	(0.0225)	(0.0426)
Total	0.0237*	0.00989	0.0294	0.0213	0.0195	0.00808
	(0.0142)	(0.0151)	(0.0187)	(0.0342)	(0.0214)	(0.0374)
Panel C: ML-CHAMP						
Language	0.0424***	0.0207	0.0306*	0.130***	0.00995	-0.0998**
	(0.0144)	(0.0170)	(0.0181)	(0.0391)	(0.0226)	(0.0407)
Math	0.0558***	0.0250	0.0677***	0.0360	0.0427*	0.0317
	(0.0152)	(0.0154)	(0.0199)	(0.0395)	(0.0222)	(0.0422)
Total	0.0515***	0.0239	0.0527***	0.0818**	0.0288	-0.0291
	(0.0137)	(0.0154)	(0.0179)	(0.0344)	(0.0209)	(0.0372)

Notes: Standard errors in parentheses. Column 1 displays estimates from the main analysis in Table 3. The remaining columns in the table display the results of regressions of child test score on treatment dummies interacted with dummies for each of the three age groups. See Appendix C for full estimating equation. Regressions include all control variables used in Table 3. Regressions include 18,222 observations, of which 4191 are in the younger age group, 11,783 are in the middle age group, and 2248 are in the older age group. Standard errors are clustered at the village level. * denotes significance at 0.10; ** at 0.05; *** at 0.01.

Table A13: Selected Children vs. Other Children Aged 5 to 8

	Impact of Treatment at Endline			
	All 5-8 Year Old Children	Selected Children	Other 5-8 Year Old Children Old	Difference: Selected vs. Other 5-8
	(1)	(2)	(3)	(4)
Panel A. ML				
Language	0.00915	0.0106	0.00778	0.00284
	(0.0237)	(0.0268)	(0.0300)	(0.0317)
Math	0.0464*	0.0386	0.0534*	-0.0148
	(0.0254)	(0.0310)	(0.0304)	(0.0346)
Total	0.0305	0.0268	0.0339	-0.00706
	(0.0232)	(0.0267)	(0.0284)	(0.0299)
Panel B: CHAMP				
Language	0.00998	0.0141	0.00627	0.00782
	(0.0220)	(0.0264)	(0.0290)	(0.0341)
Math	0.0333	0.0313	0.0353	-0.00399
	(0.0241)	(0.0298)	(0.0309)	(0.0370)
Total	0.0235	0.0243	0.0229	0.00143
	(0.0219)	(0.0260)	(0.0282)	(0.0321)
Panel C: ML-CHAMP				
Language	0.0328	0.0301	0.0353	-0.00522
	(0.0223)	(0.0267)	(0.0300)	(0.0355)
Math	0.0753***	0.0532**	0.0951***	-0.0419
	(0.0235)	(0.0269)	(0.0312)	(0.0348)
Total	0.0580***	0.0443*	0.0704**	-0.0262
	(0.0216)	(0.0243)	(0.0290)	(0.0321)

Notes: Standard errors in parentheses. The sample used in this table is restricted to children aged 5 to 8 in households with multiple children in that age group. "Selected children" are those children aged 5 to 8 selected to be the focus of specific questions in the household survey. Column 1 displays treatment effect estimates as per the specification used in Table 3. The remaining columns in the table display the results of regressions of children's test scores on treatment dummies interacted with dummies for each of the two groups. See Appendix C for full estimating equation. Regressions include all control variables used in Table 3. Regressions include 6510 observations, of which 3094 were selected as the focus for specific survey questions and 3416 are other children in that age group. Standard errors are clustered at the village level. * denotes significance at 0.10; ** at 0.05; *** at 0.01.

Table A14: Attrition Across Treatment Groups

		Relative to Control				
	Mean Control	ML	CHAMP	ML-CHAMP	P-value: Coeffs 0	N
	(1)	(2)	(3)	(4)	(5)	(6)
Mother attritted: survey	0.0308	0.00700	0.00327	0.00593	0.548	8888
	[0.173]	(0.00530)	(0.00525)	(0.00523)		
Mother attritted: test	0.0313	0.00647	0.00152	0.00647	0.487	8857
	[0.174]	(0.00536)	(0.00517)	(0.00527)		
Child attritted: test	0.0488	0.00879	0.0190***	0.0213***	0.011	15502
	[0.215]	(0.00650)	(0.00683)	(0.00752)		

Notes: Standard deviations in square brackets, standard errors in parentheses. Columns 2, 3, and 4 display the differences in means between each treatment group and the control group. Column 5 displays the p-value of the F-test that the differences in means between the treatment groups and control group are all zero. Differences in means are computed by OLS regression, controlling for stratum dummies. Standard errors are clustered at the village level. * denotes significance at 0.10; ** at 0.05; *** at 0.01.

Table A15: Characteristics of Attriters by Treatment Group: Mothers

	Dependent Variable: Mother Attrited (Either Survey or Test)					
	Baseline Variable (Control)	Interaction with Treatment Groups				
		ML	ML-CHAMP	ML-CHAMP	P-Value Coeffs 0	N
	(1)	(2)	(3)	(4)	(5)	(6)
A. Household-Level Variables						
First principal component of durables ownership	-0.00320*	0.00118	0.00170	-0.000529	0.816	8859
	(0.00192)	(0.00274)	(0.00255)	(0.00259)		
Main source of income: farming	-0.0252***	0.00453	0.00642	0.0103	0.841	8856
	(0.00785)	(0.0117)	(0.0106)	(0.0116)		
Number of children 0-4	0.00215	0.00593	0.000356	-0.000	0.758	8859
	(0.00478)	(0.00675)	(0.00593)	(0.00623)		
Number of children 5-8	-0.00119	0.000161	-0.0116	-0.00952	0.423	8859
	(0.00674)	(0.00921)	(0.00908)	(0.00941)		
Number of children 9-14	-0.00821**	-0.00274	0.000140	0.000	0.957	8859
	(0.00372)	(0.00574)	(0.00550)	(0.00596)		
Number of children 15-17	-0.0219***	0.0205**	0.0173**	0.0112	0.122	8859
	(0.00638)	(0.00964)	(0.00865)	(0.00883)		
Number of adults 18 and over	-0.00175	0.00736*	0.00482	0.00285	0.294	8859
	(0.00239)	(0.00403)	(0.00389)	(0.00322)		
Fraction of household 15 and over that can read	-0.0197**	0.0211	0.0117	-0.00147	0.368	7556
	(0.00930)	(0.0146)	(0.0133)	(0.0135)		
Fraction of household 15 and over that can do math	-0.0115	0.0255	0.00599	-0.00702	0.241	7559
	(0.00990)	(0.0162)	(0.0133)	(0.0140)		
Mother's education (years)	-0.00117	0.00391	0.00370	0.00306	0.283	8835
	(0.00145)	(0.00243)	(0.00259)	(0.00226)		
Father's education (years)	-0.000732	0.00231*	0.00138	0.000557	0.333	8154
	(0.000780)	(0.00133)	(0.00122)	(0.00112)		
Mother's age	-0.000838*	-0.000937	-0.000458	-0.000141	0.639	8859
	(0.000479)	(0.000761)	(0.000747)	(0.000742)		
Mother has past experience with literacy classes	-0.0248***	0.0236*	0.0264*	0.0189	0.162	8606
	(0.00770)	(0.0141)	(0.0143)	(0.0150)		
Mother's language score (fraction)	-0.00755	0.0343	0.0320	0.000600	0.276	8857
	(0.0148)	(0.0232)	(0.0236)	(0.0215)		
Mother's math score (fraction)	-0.00555	0.0522**	0.0316	0.00377	0.128	8857
	(0.0155)	(0.0251)	(0.0232)	(0.0223)		
Mother's total score (fraction)	-0.00700	0.0479*	0.0342	0.00266	0.155	8857
	(0.0158)	(0.0251)	(0.0244)	(0.0229)		
B. Average of Tested Children						
Child is Male	-0.00376	0.0112	0.000709	0.00511	0.850	8750
	(0.00974)	(0.0141)	(0.0135)	(0.0145)		
Child attends school / aanganwadi	0.00469	-0.0127	-0.0560***	-0.0148	0.081	8750
	(0.0116)	(0.0178)	(0.0216)	(0.0181)		

Table A15: Characteristics of Attriters by Treatment Group: Mothers (continued)

	Dependent Variable: Mother Attrited (Either Survey or Test)					
	Baseline Variable (Control)	Interaction with Treatment Groups				
		ML	ML-CHAMP	ML-CHAMP	P-Value Coeffs 0	N
	(1)	(2)	(3)	(4)	(5)	(6)
Child's language score	-0.0140	0.00115	-0.000977	-0.00889	0.973	8750
(fraction)	(0.0143)	(0.0221)	(0.0198)	(0.0219)		
Child's math score	-0.0150	-0.000908	0.00126	0.000833	1.000	8750
(fraction)	(0.0162)	(0.0237)	(0.0212)	(0.0229)		
Child's total score	-0.0155	-0.000	0.000347	-0.00357	0.998	8750
(fraction)	(0.0159)	(0.0239)	(0.0212)	(0.0233)		

Notes: Standard deviations in parentheses. This table presents the results of regressions of mother attrition (either in the survey or test) on the baseline variable indicated, the three treatment groups, interactions between the variable and each treatment group. Column 1 represents the relationship between the variable and attrition in the control group, while Columns 2-4 represent the difference in this relationship between the treatment group indicated and the control group. Column 5 displays the p-value of the F-test that the coefficients in Columns 2-4 are zero. Regressions control for stratum dummies. Standard errors are clustered at the village level. * denotes significance at 0.10; ** at 0.05; *** at 0.01.

Table A16: Characteristics of Attriters by Treatment Group: Children

	Dependent Variable: Child Attrited					
	Baseline Variable (Control)	Interaction with Treatment Groups				
		ML	ML-CHAMP	ML-CHAMP	P-Value Coeffs 0	N
	(1)	(2)	(3)	(4)	(5)	(6)
First principal component of durables ownership	-0.00249	0.00146	-0.00238	-0.00194	0.520	15502
	(0.00194)	(0.00289)	(0.00252)	(0.00300)		
Main source of income: farming	0.00159	-0.0153	-0.0244*	-0.0203	0.243	15498
	(0.00890)	(0.0124)	(0.0130)	(0.0137)		
Number of children 0-4	0.000848	0.0118	0.000419	-0.00572	0.105	15502
	(0.00608)	(0.00806)	(0.00724)	(0.00774)		
Number of children 5-8	0.00518	-0.0117	-0.0222**	-0.00948	0.196	15502
	(0.00768)	(0.00980)	(0.0103)	(0.0108)		
Number of children 9-14	-0.00850**	-0.00245	-0.00597	0.00362	0.504	15502
	(0.00402)	(0.00565)	(0.00604)	(0.00619)		
Number of children 15-17	-0.0314***	0.0324***	0.0227**	0.0185*	0.006	15502
	(0.00622)	(0.00960)	(0.00971)	(0.00985)		
Number of adults 18 and over	0.00101	0.00269	-0.000901	-0.00260	0.652	15502
	(0.00294)	(0.00448)	(0.00372)	(0.00373)		
Fraction of household 15 and over that can read	-0.00203	0.00108	-0.00447	-0.0185	0.724	13289
	(0.0120)	(0.0178)	(0.0156)	(0.0187)		
Fraction of household 15 and over that can do math	0.00607	-0.00263	-0.0242	-0.0229	0.344	13294
	(0.0129)	(0.0194)	(0.0163)	(0.0182)		
Mother's education (years)	0.00413**	-0.00168	-0.00151	-0.000879	0.940	15464
	(0.00207)	(0.00286)	(0.00314)	(0.00327)		
Father's education (years)	0.00131	-0.000736	-0.00119	-0.000998	0.824	14364
	(0.000906)	(0.00145)	(0.00132)	(0.00155)		
Mother's age	-0.000510	-0.00123	-0.00110	-0.000988	0.476	15502
	(0.000648)	(0.000819)	(0.000900)	(0.000951)		
Mother has past experience with literacy classes	-0.00964	0.000147	-0.00562	-0.0166	0.753	15074
	(0.0101)	(0.0171)	(0.0191)	(0.0164)		
Mother's language score (fraction)	0.0120	0.0139	0.00418	-0.0164	0.742	15460
	(0.0155)	(0.0238)	(0.0253)	(0.0260)		
Mother's math score (fraction)	0.0169	0.0212	0.00780	-0.0252	0.436	15460
	(0.0164)	(0.0247)	(0.0259)	(0.0275)		
Mother's total score (fraction)	0.0161	0.0194	0.00658	-0.0233	0.512	15460
	(0.0168)	(0.0244)	(0.0267)	(0.0282)		
Child is male	0.00604	0.00338	0.0145	0.00397	0.518	15502
	(0.00660)	(0.00988)	(0.00993)	(0.0102)		
Child attends school / aanganwadi	-0.00755	-0.0437**	-0.0251	-0.0110	0.158	15043
	(0.0118)	(0.0198)	(0.0221)	(0.0184)		

Table A16: Characteristics of Attriters by Treatment Group: Children (continued)

	Dependent Variable: Child Attrited					
	Baseline Variable (Control)	Interaction with Treatment Groups				
		ML	ML-CHAMP	ML-CHAMP	P-Value Coeffs 0	N
	(1)	(2)	(3)	(4)	(5)	(6)
Child's language score	0.0348***	-0.0413**	-0.0389**	-0.0436**	0.036	15502
(fraction)	(0.0121)	(0.0161)	(0.0192)	(0.0186)		
Child's math score	0.0402***	-0.0414**	-0.0449**	-0.0394**	0.069	15502
(fraction)	(0.0138)	(0.0181)	(0.0197)	(0.0201)		
Child's total score	0.0404***	-0.0441**	-0.0451**	-0.0439**	0.047	15502
(fraction)	(0.0136)	(0.0179)	(0.0202)	(0.0201)		

Notes: Standard deviations in parentheses. This table presents the results of regressions of child attrition on the baseline variable indicated, the three treatment groups, interactions between the variable and each treatment group. Column 1 represents the relationship between the variable and attrition in the control group, while Columns 2-4 represent the difference in this relationship between the treatment group indicated and the control group. Column 5 displays the p-value of the F-test that the coefficients in Columns 2-4 are zero. Regressions control for stratum dummies. Standard errors are clustered at the village level. * denotes significance at 0.10; ** at 0.05; *** at 0.01.

Table A17: Balance After Attrition: Child-level Data

		Relative to Control				
	Mean Control	ML	CHAMP	ML-CHAMP	P-value: Coeffs 0	N
	(1)	(2)	(3)	(4)	(5)	(6)
First principal component of durables ownership	-0.0726 [2.28]	0.00492 (0.0882)	0.138 (0.104)	0.0417 (0.0958)	0.516	18283
Main source of income: farming	0.479 [0.500]	0.0227 (0.0235)	0.00342 (0.0258)	0.0576** (0.0234)	0.051	18282
Number of children 0-4	1.07 [0.926]	-0.00342 (0.0355)	0.0672* (0.0407)	0.117*** (0.0354)	0.002	18283
Number of children 5-8	1.59 [0.668]	-0.0194 (0.0248)	0.0142 (0.0266)	-0.00587 (0.0236)	0.655	18283
Number of children 9-14	1.03 [0.955]	0.0739** (0.0312)	0.0537 (0.0349)	0.0777** (0.0318)	0.040	18283
Number of children 15-17	0.273 [0.502]	0.00460 (0.0173)	0.0111 (0.0184)	-0.00762 (0.0171)	0.773	18283
Number of adults 18 and over	2.96 [1.61]	0.0281 (0.0659)	0.197** (0.0775)	0.186*** (0.0682)	0.007	18283
Fraction of household 15 and over that can read	0.381 [0.426]	-0.0192 (0.0184)	0.0219 (0.0201)	0.00517 (0.0191)	0.234	15670
Fraction of household 15 and over that can do math	0.242 [0.375]	-0.00257 (0.0159)	0.0279 (0.0187)	0.0207 (0.0164)	0.220	15672
Mother's education (years)	0.708 [2.15]	-0.00500 (0.0957)	0.136 (0.115)	0.0452 (0.102)	0.566	18235
Father's education (years)	3.76 [4.38]	-0.182 (0.208)	0.0704 (0.231)	0.199 (0.213)	0.330	17024
Mother's age	32.4 [6.95]	-0.254 (0.270)	-0.178 (0.299)	-0.143 (0.271)	0.825	18283
Mother has past experience with literacy classes	0.119 [0.324]	-0.0129 (0.0138)	-0.0115 (0.0146)	-0.0254* (0.0139)	0.322	17778
Mother's language score (fraction)	0.294 [0.241]	-0.00227 (0.0108)	0.0112 (0.0132)	0.00446 (0.0119)	0.722	18221
Mother's math score (fraction)	0.208 [0.234]	0.000837 (0.0109)	0.00881 (0.0132)	0.00464 (0.0120)	0.900	18221
Mother's total score (fraction)	0.244 [0.227]	-0.000460 (0.0106)	0.00981 (0.0130)	0.00457 (0.0118)	0.833	18221
Child is male	0.511 [0.500]	-0.00735 (0.00979)	-0.00305 (0.0103)	-0.0126 (0.0101)	0.628	18283
Child attends school / aanganwadi	0.882 [0.323]	0.00160 (0.0128)	0.00254 (0.0121)	0.0209* (0.0123)	0.235	18283

Table A17: Balance After Attrition: Child-level Data (continued)

		Relative to Control				
	Mean Control	ML	CHAMP	ML-CHAMP	P-value: Coeffs 0	N
	(1)	(2)	(3)	(4)	(5)	(6)
Child's language score (fraction)	0.348 [0.296]	0.0109 (0.0112)	0.0130 (0.0116)	0.0134 (0.0112)	0.599	14576
Child's math score (fraction)	0.274 [0.302]	0.0149 (0.0113)	0.0178 (0.0120)	0.0114 (0.0112)	0.447	14576
Child's total score (fraction)	0.307 [0.290]	0.0131 (0.0110)	0.0157 (0.0116)	0.0123 (0.0109)	0.509	14576

Notes: Standard deviations in square brackets, standard errors in parentheses. The sample in each row includes all children tested at endline for whom baseline values of the indicated variable are available. Columns 2, 3, and 4 display the differences in means between each treatment group and the control group. Column 5 displays the p-value of the F-test that the differences in means between the treatment groups and control group are all zero. Differences in means are computed by OLS regression, controlling for stratum dummies. Standard errors are clustered at the village level. * denotes significance at 0.10; ** at 0.05; *** at 0.01.

Table A18: Children's Test Scores, Using Lee (2009) Bounds

	Impact of Treatment at Endline								
	ML			CHAMP			ML-CHAMP		
	Estimate	Lower	Upper	Estimate	Lower	Upper	Estimate	Lower	Upper
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Language	-0.0142	-0.0191	-0.00545	0.00976	-0.001000	0.0260	0.0472**	0.0356*	0.0646***
	(0.0197)	(0.0197)	(0.0197)	(0.0191)	(0.0191)	(0.0191)	(0.0185)	(0.0185)	(0.0185)
Math	0.0364*	0.0330*	0.0418**	0.0417**	0.0326*	0.0509***	0.0624***	0.0522***	0.0715***
	(0.0195)	(0.0195)	(0.0195)	(0.0198)	(0.0198)	(0.0198)	(0.0196)	(0.0196)	(0.0196)
Total	0.0139	0.00813	0.0178	0.0282	0.0170	0.0366*	0.0575***	0.0454**	0.0668***
	(0.0182)	(0.0182)	(0.0182)	(0.0192)	(0.0192)	(0.0192)	(0.0177)	(0.0177)	(0.0177)

Notes: Notes: Standard errors in parentheses. Standard errors computed from 500 bootstrap draws, sampling by village. Sample for regressions is restricted children who took the baseline test. Columns 1, 4, and 7 display estimates from Appendix Table 4, Panel A, Columns 3, 6, and 9. Columns 2-3, 5-6, and 8-9 display the bounds of the estimates using Lee's (2009) trimming method. Number of observations equals 14,576 for main estimates and 14,438 for upper and lower bound estimates. * denotes significance at 0.10; ** at 0.05; *** at 0.01.

Table A19: Tests for ML Spillovers to CHAMP and Control Hamlets in Bihar

	Type of Independent Variables			
	Number of Close Hamlets in Each Category		Dummy for Close Hamlet in Each Category	
	(1)	(2)	(3)	(4)
Panel A. Dependent Variable: Mother Knew of Classes in Village				
Hamlets within 1km	0.0267		0.0641*	
	(0.0217)		(0.0327)	
Hamlets in village		-0.00317		-0.0196
		(0.0185)		(0.0349)
Constant	0.290***	0.307***	0.279***	0.315***
	(0.0215)	(0.0255)	(0.0230)	(0.0292)
R-Squared	0.002	0.000	0.005	0.000
N	2145	2145	2145	2145
Panel B. Dependent Variable: Mother Attended				
Hamlets within 1km	0.00366		0.0248	
	(0.0132)		(0.0249)	
Hamlets in village		0.00188		-0.0126
		(0.0139)		(0.0254)
Constant	0.130***	0.131***	0.123***	0.139***
	(0.0154)	(0.0179)	(0.0165)	(0.0201)
R-Squared	0.000	0.000	0.001	0.000
N	2145	2145	2145	2145

Notes: Each column displays estimated coefficients of an OLS regression of self-reported mother attendance on the variables listed. Sample restricted to Bihar control and CHAMP villages. The independent variables in Columns 1 and 2 represent the number of nearby ML and ML-CHAMP villages in each category, while the independent variables in Columns 3 and 4 are dummies representing the presence of each type of nearby village. Out of 120 CHAMP and Control hamlets, 50 have an ML or ML-CHAMP hamlet within 1 km (average 0.56), and 68 have an ML or ML-CHAMP hamlet in the larger village (average 0.83). Standard errors, in parentheses, are clustered at the village level. * denotes significance at 0.10; ** at 0.05; *** at 0.01.

Table A20: Determinants of Mothers' Take-up

	Intervention			
	ML			CHAMP
	Attended (Survey)	Attended (Admin)	Pct. Attended (Admin)	Pct. Attended (Admin)
	(1)	(2)	(3)	(4)
First principal component of durables ownership	-0.00504	-0.00403	-0.00291	-0.000330
	(0.00500)	(0.00487)	(0.00253)	(0.00215)
Number of children 5-14	0.0118	0.00377	0.000355	0.00696**
	(0.00758)	(0.00626)	(0.00393)	(0.00305)
Fraction of children 5-8 in school / aanganwadi	0.0474*	0.0540*	0.0141	0.0457***
	(0.0242)	(0.0280)	(0.0141)	(0.0137)
Average children's total test score (normalized)	-0.00286	-0.0165*	0.00438	0.0157***
	(0.0108)	(0.00889)	(0.00584)	(0.00436)
Father's education (years)	-0.00374*	-0.00192	0.000313	-0.000142
	(0.00219)	(0.00188)	(0.00125)	(0.000916)
Mother's education > 0	0.144***	0.0336	0.0461*	0.0137
	(0.0432)	(0.0361)	(0.0240)	(0.0217)
Mother's education (years)	-0.0466***	-0.0289***	-0.0241***	-0.0109***
	(0.00744)	(0.00713)	(0.00357)	(0.00334)
Mother's age	-0.00130	0.000688	-0.000877	0.00101**
	(0.00127)	(0.00105)	(0.000605)	(0.000482)
Mother's total test score (normalized)	0.0566***	0.0330***	0.0312***	0.00795
	(0.0152)	(0.0125)	(0.00870)	(0.00574)
Mother has past experience with literacy classes	0.0674**	-0.00318	0.0292*	0.00810
	(0.0286)	(0.0257)	(0.0162)	(0.00962)
Mother is member of self-help group	0.101***	0.0790***	0.0471***	0.0204**
	(0.0253)	(0.0254)	(0.0142)	(0.00873)
Baseline Mothers' Participation Index	0.0248***	0.00117	0.00718	0.00341
	(0.00914)	(0.00727)	(0.00468)	(0.00327)
Total hours worked (in and out of home) per week	0.000341	0.000211	-0.000	-0.000
	(0.000385)	(0.000316)	(0.000169)	(0.000154)
State = Bihar	0.120***	0.0193	-0.0231	-0.0703***
	(0.0297)	(0.0367)	(0.0164)	(0.0128)
Sample	ML & ML-CHAMP			CHAMP & ML-CHAMP
Mean of Dep. Var.	0.425	0.810	0.254	0.852
R-Squared	0.057	0.027	0.027	0.054
N	3795	3914	3870	3875

Notes: Each column displays estimated coefficients of an OLS regression of the mother attendance measure indicated on the variables listed. The dependent variables in Columns 1 and 2 are dummies for attendance in ML classes from the survey and administrative data, respectively. The dependent variables in Columns 3 and 4 are the percentage of ML classes or CHAMP sessions attended, respectively. The Mothers' Participation index is defined in Table 6. A self-help group is a group of villagers that pools savings and provides loans to members of the group. Standard errors, in parentheses, are clustered at the village level. * denotes significance at 0.10; ** at 0.05; *** at 0.01.

Table A21: Individual Empowerment Measures from PAP

	Endline Mean	Impact of Treatment at Endline			
	Control	ML	CHAMP	ML-CHAMP	N
	(1)	(2)	(3)	(4)	(5)
Index of All Measures (26 variables)	0.000 [1.00]	0.0713** (0.0347)	0.0548 (0.0340)	0.144*** (0.0363)	8581
Mobility and Networks Index	-0.000 [1.000]	0.00483 (0.0384)	-0.0318 (0.0399)	-0.00415 (0.0412)	8581
Times left village in the past month	1.15 [1.65]	0.0372 (0.0574)	0.0693 (0.0601)	0.100 (0.0636)	8581
Left village without adult accompaniment	0.113 [0.316]	0.00279 (0.0101)	0.0286*** (0.0105)	0.00815 (0.0104)	8581
Left village without permission	0.0168 [0.129]	-0.00359 (0.00360)	0.000979 (0.00385)	-0.00231 (0.00367)	8581
Mother is member of self-help group	0.310 [0.463]	-0.0203 (0.0203)	-0.0274 (0.0172)	-0.0251 (0.0175)	8888
How often attends self-help group meetings	0.289 [0.441]	0.000 (0.0201)	-0.0577*** (0.0209)	-0.0247 (0.0212)	8578
Capability Index	-0.000 [1.000]	0.0692** (0.0347)	0.0176 (0.0349)	0.132*** (0.0358)	8581
Considers self literate	0.233 [0.423]	0.0477*** (0.0126)	0.00648 (0.0124)	0.0693*** (0.0128)	8581
Signed name on official documents	0.561 [0.496]	0.0614*** (0.0134)	0.00759 (0.0126)	0.0767*** (0.0130)	8581
Counts change	0.867 [0.339]	0.0255** (0.0108)	0.0220** (0.0106)	0.0415*** (0.0105)	8581
Caught mistakes counting change	0.314 [0.464]	0.0147 (0.0168)	-0.00905 (0.0160)	0.0238 (0.0166)	8581
Knows NREGA wage	0.621 [0.485]	-0.0609** (0.0243)	-0.00727 (0.0245)	-0.0143 (0.0242)	8356
Knows self-help-group account balance	0.127 [0.333]	-0.00320 (0.0130)	-0.0186 (0.0133)	-0.0120 (0.0131)	8581
Fills self-help group passbook herself	0.0135 [0.116]	0.00463 (0.00372)	0.00572 (0.00395)	0.00364 (0.00386)	8332
Beliefs and Attitudes Index	0.000 [1.000]	0.0626** (0.0318)	0.121*** (0.0348)	0.135*** (0.0349)	8581
Does not believe husband should be more educated than wife	0.330 [0.470]	0.0463*** (0.0158)	0.0137 (0.0164)	0.0580*** (0.0165)	8315
Does not believe girls should be at home or married when 18	0.0449 [0.207]	-0.00288 (0.00636)	0.00526 (0.00666)	0.00251 (0.00674)	8581

Table A21: Individual Empowerment Measures from PAP (continued)

	Endline Mean	Impact of Treatment at Endline			
	Control	ML	CHAMP	ML-CHAMP	N
	(1)	(2)	(3)	(4)	(5)
Believes girls should be doing further studies when 18	0.280 [0.449]	0.0641*** (0.0154)	0.0865*** (0.0154)	0.105*** (0.0158)	8581
Would have wanted to study up to (grade level)	5.80 [4.36]	-0.412*** (0.142)	0.151 (0.144)	-0.307** (0.135)	8290
Happiness	3.11 [1.44]	0.0472 (0.0493)	0.0586 (0.0502)	0.0383 (0.0464)	8581

Notes: Standard deviations in square brackets, standard errors in parentheses. Columns 2, 3, and 4 display estimated coefficients of a regression of the outcome in each row on treatment group dummies, controlling for stratum dummies, baseline values (where available), and all variables in Table 1, using household-level averages for child-level variables. Missing values of control variables are coded as 0, with additional dummies indicating missing values. Each index is a normalized average of z-scores of the component variables of the index, using the control group means and standard deviations. Baseline indices only include indicators for which data were collected. The index of all measures includes all individual measures in this table, as well as the 9 measures of mother involvement in household decisions listed in Table 5. "Knows NREGA wage" indicates whether the mother answered an amount between Rs. 100 and Rs. 150 to the question "What is the per day wage fixed by the government under NREGA?" Official wage rates in Bihar and Rajasthan at the time of the survey were Rs. 122 and Rs. 124, respectively. "Happiness" is the answer to the question Last week, how happy were you? coded on a scale from 1 (very sad) to 5 (very happy). Standard errors are clustered at the village level. * denotes significance at 0.10; ** at 0.05; *** at 0.01

Table A22: Mothers' Aspirations and Perceptions

	Endline Mean	Impact of Treatment at Endline			
	Control	ML	CHAMP	ML-CHAMP	N
	(1)	(2)	(3)	(4)	(5)
Panel A. Perceptions of parental involvement					
Believes mother should be responsible for children's education	0.727 [0.446]	0.0408*** (0.0129)	0.0296** (0.0133)	0.0395*** (0.0129)	8467
Number of educational activities for which parents are responsible	1.39 [1.03]	0.0613 (0.0418)	0.0440 (0.0406)	0.0749** (0.0367)	8581
Number of things mother can do to help child improve studies	1.90 [1.12]	0.0691* (0.0412)	0.0121 (0.0445)	0.0938** (0.0397)	8513
Identifies home help as reason for children's achievement	0.210 [0.407]	0.00788 (0.0141)	0.00452 (0.0132)	-0.00491 (0.0138)	8581
Panel B. Expectations / aspirations for child's attainment					
Believes child will pass 8th grade	0.851 [0.357]	-0.00246 (0.0118)	-0.00538 (0.0115)	-0.000237 (0.0110)	8224
Believes child will pass 12th grade	0.649 [0.477]	0.000826 (0.0162)	-0.00182 (0.0162)	-0.00307 (0.0163)	7978
Highest grade to which mother aspires for child to study	10.1 [3.05]	-0.0131 (0.107)	0.124 (0.108)	0.245** (0.116)	4841
Highest grade to which mother aspires for child to study: child's wish	0.432 [0.495]	0.0108 (0.0125)	-0.00943 (0.0145)	0.00393 (0.0137)	8513
Panel C. Mother's perceptions of child's language / math ability					
Perception of child's language ability (out of 4)	2.46 [1.59]	-0.0285 (0.0460)	0.154*** (0.0472)	0.118** (0.0472)	8028
Perception of child's math ability (out of 4)	2.57 [1.61]	0.0100 (0.0479)	0.211*** (0.0494)	0.154*** (0.0530)	8101
Absolute value of difference between language perception and child's score	1.60 [1.36]	-0.0155 (0.0428)	0.133*** (0.0447)	0.0716 (0.0447)	7822
Absolute value of difference between math perception and child's score	1.48 [1.27]	-0.0312 (0.0432)	0.156*** (0.0465)	0.0936** (0.0434)	7897

Notes: Standard deviations in square brackets, standard errors in parentheses. Columns 2, 3, and 4 display estimated coefficients of a regression of the outcome in each row on treatment group dummies, controlling for stratum dummies, baseline values (where available), and all variables in Table 1, using household-level averages for child-level variables. Missing values of control variables are coded as 0, with additional dummies indicating missing values. "Child" refers to one randomly selected child per household aged 5 to 8 at baseline. "Number of educational activities for which parents are responsible" is constructed as the number of responses the mother gave to the open-ended question, "When it comes to children's education, what are the responsibilities parents have other than making sure their children attend school?" Possible responses include: helping with homework, checking homework, telling the child to study, meeting with teachers, buying educational materials, sending the child for tuitions, sending the child to a better school, and spending money on the child's education. "Number of things mother can do to help child improve studies" is constructed as the number of responses the mother gave to the open-ended question "What can you do to help your child do better in his/her studies?" Possible responses include those listed above in addition to spending more time with the child, playing with the child, telling stories to the child, and sending the child to school. The regression using "highest grade to which mother aspires for child to study" as an outcome has missing observations due to mothers indicating that grade attainment would be the child's decision. Regressions using beliefs of 8th and 12th grade passing and perceptions of child ability have fewer observations due to responses of "don't know" to the survey questions. Standard errors are clustered at the village level. * denotes significance at 0.10; ** at 0.05; *** at 0.01.