Background Notes

The Government of Sindh (GoSindh) has devoted resources to support school-based management reforms for the purpose of improving school participation and learning outcomes through better accountability systems. Based on recommendations from the Sindh Education Sector Reform Program, GoSindh transfers Rs. 22000 annually to the School Management Committees at government primary schools in an attempt to motivate community stakeholders to engage in school improvement activities and to actively contribute in school level decision making. However, this policy has not been impactful and the school committees have remained largely non-functional with funds not being effectively utilized. To help overcome this problem, we introduce two interventions designed to empower the parents and communities with information on rights, roles and responsibilities and to provide them with a platform to engage in a dialogue to discuss school-related issues via School Management Committees (SMCs). The first intervention mobilizes the community through an externally administered village level meeting and the second intervention virtually connects the stakeholders through a SMS based community dialogue platform. In addition, the study employs a cross-over design to layer the two interventions with transparent election of committee members and participatory training for the development of the School Improvement Plan (SIP) in order to address any capacity constraints at the school management committee level.

Based on the results of this study, we expect to make recommendations to the government of Sindh that will ensure effective participation of communities in school related issues. The study will help understand i) whether externally administered support with customized content and design can motivate and promote active participation of community stakeholders in school improvement activities ii) whether creating virtual spaces for dialogue between teachers, SMC members and communities are more cost-effective than traditional face-to-face meetings iii) whether the quality and capacity of SMC bodies matters for community engagement to have an impact on education outcomes and iv) whether the interventions are more impactful in areas where SMCs have real power (utilization of funds) relative to other mandated tasks (reducing teacher absenteeism) for which SMCs have no real authority.

Sample Selection

District Selection

The districts chosen for the study were based on district ranks in terms of school density in the district and school participation rates from the Pakistan Social and Living Standards Measurement Survey (PSLM) and Administrative School Census (ASC) data respectively. One district each was chosen from the low, middle and top category to make an overall representative sample of rural Sindh. By this method, the final districts selected were Mirpur Khas, Mitiari and Sanghar. Using the ASC data in terms of number of schools, Mitiari was ranked the third smallest district, Mirpur Khas was ranked at number twelve (middle rank) and Sanghar at number eighteen (top rank). Using the PSLM for education indicators (proportion of

adults who ever attended school and school participation rate of primary-age children), Sanghar ranked at the top followed by Mitiari (median) and lastly by Mirpur Khas.

The Administrative School Census (ASC) data is collected by the Government of Sindh every year to provide an updated list of primary schools in all districts of Sindh. The census data for 2010-11 was used to randomly draw 300 villages within our sample districts. However, because of poor quality of administrative census data, we conducted a census listing of all households and also mapped all primary schools in these 300 villages to set the population frame for the study.

Census Surveys

The Census survey was administered to accurately map villages and schools in the 300 villages randomly chosen for the study. The purpose of the census was i) to enumerate a list of households for setting the population census frame ii) to collect basic information on all schools in the village and map all schools in the village and iii) to gather qualitative data at a community level from a focus group to help refine the intervention design. Three instruments were administered for this purpose.

Household Listing Tool

Collected basic information from the head of the household on age, gender, education, occupation and income. It also records the number of primary school-age children in the household and the proportion of these children that are enrolled in a government primary school. Household location area and GPS coordinates are also marked for accurate mapping.

School Mapping Tool

Obtained basic information on all schools (including data on enrollment and attendance by student gender as well as teacher-on-task measures) as identified by the community. In addition, spatial mapping of the schools was also done through GPS coordinates.

Focus Group Questionnaire

Collected information from a diverse demographic group of 8-10 respondents on schools, health centers, roads and other village infrastructure as well as details on village influential, community organizations and the history of village level meetings. Specific questions on the use of mobile phones were asked to influence the design of the Community Dialogue Platform. This data proved to be critical in assisting the mobilization firm in targeting the right nodes for organizing community-level meetings. A roster on basic information of the participants is also maintained.

From the census surveys, we identified 181061 households in the sample 300 villages. However, the household listing tool could only be administered for 177834 households because the remaining either refused to participate or were not at home. Similarly, the focus group questionnaire identified 1727 schools out of which 1685 were government primary schools in these villages. School mapping showed a total of 59,477 students enrolled in these government primary schools. These results were used to identify the school and household sampling strategies.

School Sampling Strategy

The school sampling strategy was primarily to target all primary schools in the main settlement that were either open on the day of visit or closed for a period of less than one year. In addition, 15% of the remaining schools in these villages were also surveyed to capture spillover effects. For villages with no school in the main settlement, all schools located out of the main settlement were surveyed[1]. For villages that did not meet these criteria, all schools were sampled even if the school was closed for more than one year. 4 villages had to be dropped because no school was found in village-level mapping of primary schools

Household Sampling Strategy

The household sampling strategy for each village was to randomly select 20 households from the main settlement and 8 households from the peripheral settlements conditional on the household having at least one child of school going age (5-16 years). From this list, the first 16 households were to be surveyed and in case the head of the household was not available, the household was substituted from the list of four buffer households. For the peripheral settlement, any 4 out of the 8 households were surveyed[2]. In addition, household questionnaires were also administered to all SMC members from the target schools, approximately 4 households in a village.

Sample	School[3]	Household[4]
Expected Response	299 + 54 + 132 + 16 = 501	24 x 296 = 7104
Actual Response	514[5]	6506[6]

---

[1] A maximum of 3 schools were surveyed outside the main settlement of a village based on enrollment figures.
[2] Flexibility allowed for peripheral settlements because of large distances between households.
[3] School Level Survey: 514 Schools; 454 Head Teacher; 409 Teacher and 4573 Student Questionnaires administered.
[4] Household Level Survey: 6505 Head of the Household; 6503 Spouse; 5281 Children and 901 SMC Questionnaires administered.
[5] 13 additional schools were found in the main settlements of the sample villages that were presumably missed in the village-level mapping of schools for the census.

School Surveys

Detailed data on school-level variables such as enrollment, attendance, teacher on-task, facilities, school committees, funding and expenditure were collected through a set of four questionnaires: School Observation, Teacher Roster, Head Teacher and Teacher Questionnaire. In addition, a list of SMC members was enumerated at the school-level for household surveys.

School Observation Questionnaire

School questionnaire consisted of five sections and was based on the observation of the enumerator about school building, facilities, hygiene conditions, on-going classroom practices and teacher activities. The questionnaire also required the enumerator to record school GPS coordinates and school visit details.

Head Teacher Questionnaire

Head Teacher questionnaire compromised of two parts: Information based on the head teacher's knowledge and information based on official school records. The first part gathered data on the respondent's personal and professional background as well as his knowledge of students, school facilities and SMC. The second part collected official school details on school improvement plan, enrollment, attendance, fee, SMC funds and expenditures.

Teacher Questionnaire

Teacher questionnaire consisted of nine sections and was administered to all teachers present in the school[7]. It gathered the personal and professional information of the teacher as well as his perceptions on SMC functionality, student learning and returns to education.

Teacher Roster Questionnaire

Teacher Roster collected information on teachers that are currently teaching in the school and those that left or transferred over the last two years. The survey recorded teacher information on attendance, contact number, gender, contract type, pay scale and class taught. For teachers that have left, it also covered information on reasons for leaving school. The information for the roster is to be provided by the head teacher or the senior most teacher in the school.

---

[6] Some of the households in the Household listing could not be located in the field, particularly SMC households some of which did not even live in the village or were not to found even after repeated attempts by the survey firm.
[7] A maximum of three teachers were interviewed in each school for logistical purposes.

Household Surveys

The baseline survey also covered households to gather information on demographic and socioeconomic characteristics, parent choices about child's school, parent engagement with school's SMC, adult perceptions of returns to schooling and quality of learning through four set of questionnaires: Household Roster, Household Head Questionnaire, Spouse of Head Questionnaire and SMC Member Questionnaire.

Household Roster Questionnaire

The household roster questionnaire collected information about gender, age, marital status, education and job status of all members of the household. This roster information was filled by the head of the household but in case of his absence, the survey was filled by other members that were required to explain their relationship to the head.

Head of the Household Questionnaire

The Head of the household questionnaire consisted of fifteen sections and collected detail information on family members, education, consumption pattern, business details, household expenditures and incomes. It also recorded information on about the respondent's aspirations, awareness about the SMC, trust in the education system and perceptions about returns to education and quality of learning in the respective school.

Female Questionnaire

The Female questionnaire consisted of fourteen sections and was to be filled by the spouse of the head of the household. It collected information on SMC awareness, perceptions about returns and quality of education and aspirations. In addition, it also covered topic on children education, health, use of media sources and household assets.

Adult Literacy Test

A specialized adult literacy test designed for this study was administered to the male and female heads of the household with the purpose to identify average literacy levels in the village. The test had three components that evaluated respondents' proficiency in thinking skills, numeracy and prose literacy at three difficulty levels: basic, intermediate and advanced. For each question, the enumerator read out the instructions, showed flash cards and recorded the response of the respondent. In order to move onto a

higher difficulty level, the respondent had to answer at least 2 questions correctly on the given level of difficulty.

The purpose of the adult literacy test was to group villages as literate and illiterate. This will help understand where the results of the intervention are likely to be strong. Further, by collecting data from both male and female heads of households, we can estimate gender disaggregated impacts of proposed interventions.

Child Questionnaire and Test

A child questionnaire was administered at both the household and school level. It records the child's basic information, activities and perceptions about learning and school. For children in the household, there was an additional section to record the activities and work undertaken by a child throughout the day.

A Learning Assessment Test (LAT) was also conducted to benchmark the performance of the child with regional and international standards. The test was made up of multiple choice and short-answer questions encompassing concepts from Grade 1 through Grade 5 and was based on three sections: English, Mathematics and Sindhi.

At the household level, the test was administered to children between ages 7 to 13 years regardless of their enrollment status. At the school level, the test was administered to students of grade 3 and 4 but because of multi grade classes within the school, some students from other grades were also tested.

SMC Questionnaire

A list of SMC members was enumerated at the school-level for household surveys and an SMC instrument was to be filled by a household member who is an Executive Member of the SMC. This questionnaire gathered personal information about the respondent and recorded detailed information on the functioning and awareness of the SMC.

Data Collection

Data Collection Timeline

The data collection timeline was divided into two fiscal years. For 2012, the census surveys were firstly implemented and completed. This information was used to shortlist the final list of households and schools to be sampled. After this, the baseline survey was administered at household and school level. The initial timeline for the survey had to be delayed because of the floods in Sindh causing the school level surveys were conducted in two rounds: before and after the summer vacations. The household level

surveys including the head of the household, spouse and child questionnaire were successfully completed in this year but for the school level survey, the school, teacher and student questionnaires continued to be administered until January 2013. Some households that were flagged for inconsistencies were also re-surveyed during this time. On the intervention side, the community engagement material and community dialogue portal was designed in 2013 and the intervention was fully implemented by 2013.

Data Collectors & Collection Mode

The data was collected through face to face surveys conducted by the enumerators hired locally from the sampled districts. This task of data collection was outsourced to Weitek Group (WG) who in coordination with the impact evaluation team, provided rigorous classroom and field training before initiating the field work. Field teams were able to track households listed in the sample lists. They were also provided with a list of identifiers for the household head. This ensures that we will not run into problems of attrition of sample when moving from baseline to follow-up surveys.

Quality of data collected was ensured by hiring a third party monitoring firm that performed cross validation on randomly selected households. All sections of the survey instruments at the household and school level were fully answered by the respective respondent. For the school questionnaire, the enumerator filled the survey based on his observation about the sample school. In case of a closed school on the day of visit, the enumerator only filled the sections on conditions of school facilities and left the sections on classroom practices as empty.

At the time of baseline data collection, there were a few treatment villages where field teams were met with resistance from the community and village influentials and were not able to implement elections of SMC members.

Data Cleaning

The data uploaded is cleaned so any missing or unknown data is replaced with a missing value. Annex 1 and 2 represent a complete list of the data sets with the unique identifier for each instrument and details of the survey instruments. The census household listing data is at household level, the community data is at settlement level and school mapping data at school level. The baseline household data is at individual level where each individual is marked with a unique ID at household level. Similarly for school level instruments, the respondents (teacher, head teacher and students) are marked at an individual level with a unique ID at school level. The school observation questionnaire is administered at school level with a unique identity for each school. Any duplicates at data entry stage have been removed.

For the LAT test, questions that were not attempted by the child were entered with the code 'NA'. For scoring the test, all questions not attempted were replace by a missing value.

Intervention Details

This study follows a randomized control trial (RCT) methodology and employs a difference-in-difference model using assignment to treatment as an instrument to recover the intent-to-treat estimator. The control group forms the counterfactual in the study. For the intervention, the sample villages were randomly divided into five equal groups. One group was the control group and the other four were the treatment groups. The control group (T1) was not given any information or capacity building intervention. For the first treatment group (T2), an externally administered village level meeting was organized to enable a face to face meeting of all stakeholders (parents, teachers, village influential and council members) to discuss school related issues and to encourage participation of community in school level management and decision making. For the third treatment group (T3), a virtual network of stakeholders was created through an ICT enabled SMS platform. A face-to-face meeting of all stakeholders (parents, teachers, village influential and council members) was also organized to encourage discussion of school related problems on a virtual platform. For the fourth treatment group (T4), in addition to information exchange (T2), school committees were reconstituted through elections per the official guidelines for maintaining school committees. Newly elected members were provided capacity-building support and resources which they needed to perform their expected roles and responsibilities. Once elected, the newly constituted executive body of the SMC had three meetings (3 hours each) with a reasonable gap between each meeting. For the fifth treatment group (T5), similar elections were conducted in addition to information exchange through a virtual network (T3). The distribution of villages by treatment group is presented in annex 3.

Census Survey	
Household Listing	Each row represents one household. Unique household id can be generated using district, village, settlement, mohallah and household code.
School Mapping	Each row represents one school. School id duplicates can exist if more than one teacher information is recorded. Unique school id can be generated using district, village and school code.
Focus Group Questionnaire	Each row represents one settlement. Unique settlement can be generated using district, village and settlement code.

Household Level Survey	
Household Head Questionnaire	Each row represents one member of the household. Each individual is given a member id which is unique at household level. Household id is a unique identifier.
Female Questionnaire	Each row represents one member of the household. Each individual is given a member id which is unique at household level. Household id is a unique identifier.
Child Questionnaire	Each row represents one child that filled the questionnaire. Each child is given a member id which is unique at household level.
SMC Questionnaire	Each row represents one SMC member that filled the questionnaire. Each member is uniquely identified by his member id and household id.
Household Roster	Each row represents one member of the household. Each individual is given a member id which is unique at household level. Household id is a unique identifier.

School Level Survey	
School Observation Questionnaire	Each row represents one school. School id is a unique identifier.
Head Teacher Questionnaire	Each row represents one head teacher in the school. Each respondent has a teacher id which is unique at school level. School id is a unique identifier.
Teacher Questionnaire	Each row represents a teacher in the school. Each respondent has a teacher id which is unique at school level. School id is a unique identifier. Up to three teachers from each school were surveyed.
Student Questionnaire	Each row represents one student that filled the questionnaire. Each student is given a unique student id.
Teacher Roster	Each row represents one teacher in the School. Each respondent has a teacher id which is unique at school level. School id is a unique

	identifier.

Annex 2: Baseline Survey Instrument Details_____

Household Level Instruments

Household Head Questionnaire	Description
Section 0	Household characteristics
Section 1	Household members information
Section 2	Schooling all children
Section 3	Farm work
Section 4	Non farm wage work
Section 5	Household enterprise
Section 6	Household annual income
Section 7	Credit and savings
Section 8	Adult literacy test
Section 9	SMC awareness
Section 10	Perceptions of earnings and quality of learning
Section 11	Perceptions of value of education
Section 12	Trust in education system
Section 13	Perceptions of corruption in education
Section 14	School SMC information
Section 15	Participation in village organizations/collective action

Female Questionnaire	Description
Section 0	Household characteristics
Section 1	Household members health
Section 2	Education history of children ever enrolled in school
Section 3	Farm work
Section 4	Non farm wage work
Section 5	Consumption
Section 6	Household assets
Section 7	Adult literacy test
Section 8	SMC awareness
Section 9	Perceptions of earnings and quality of learning
Section 10	Perceptions of value of education

Section 11	Aspirations/education decision making
Section 12	Respondent's use of media
Section 13	Children use of media

Child Questionnaire	Description
Section 1	Personal Information
Section 2	Teaching Practices
Section 3	Student's perceptions
Section 4	Time allocation child

SMC Questionnaire	Description
Section 1	Personal Information
Section 2	SMC Awareness

School Level Instruments

Head Teacher Questionnaire	Description
Part 1	
Section 1	Background information about head master
Section 2	Head teacher professional background
Section 3	General School Information
Section 4	General details about students enrolled in the school
Section 5	Basic SMC information
Section 6	SMC perception
Section 7	Involvement of government officials
Section 8	Access to facilities
Section 9	School location and perception analysis
Section 10	Perceptions about learning
Section 11	Teacher's network
Part 2	
Section 1	School records
Section 2	Participation in donor/government programs
Section 3	Textbooks
Section 4	School fees
Section 5	Enrollment and attendance in school

Section 6	Income and expenditures
Section 7	Records based SMC information
Section 8	SMC expenditures statement for the last school year

Teacher Questionnaire	Description
Section 1	Personal Information
Section 2	SMC awareness and perceptions
Section 3	SMC factual
Section 4	Professional background
Section 5	Classroom practices
Section 6	Perceptions of earnings and quality of learning
Section 7	Perceptions about learning
Section 8	Teacher perceptions and efficacy
Section 9	Teacher's interaction

School Questionnaire	Description
Section 1	Observation [Outside School]
Section 2	Observation [School Structure]
Section 3	Observation [School facilities]
Section 4	Observation [Classroom practices & facilities]
Section 5	Observation [Class gathering practices]

Teacher Roster	Description
Section 1	Teachers who are currently serving the school
Section 2	Teachers who left school in the last two years

Student Questionnaire	Description
Section 1	Personal information
Section 2	Teaching practices
Section 3	Student's perceptions
Section 4	Feedback about teacher [Not filled]

INFO-MEET-SUPPORT
[57 V, 1368 HH, 92 Schools]

INFO-SMS
[57 V, 1368 HHs, 91 Schools]

CONTROL
[57 V, 1368 HH, 97 schools]

INFO-MEET
[59 V, 1416 HH, 103 Schools]

INFO-SMS-Support
[57 V, 1368 HH, 104 Schools]