COMMUNITY ENGAGEMENT MECHANISMS: FIELD EXPERIMENT IN PAKISTAN

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THE WORLD BANK

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Dedication

This project is dedicated to the memory of Mr. Muhammad Nouman Bashir, who lost his life to Hepatitis-E virus contracted during the implementation of the project in Sindh. May his soul rest in peace. Mr. Bashir was a member of the implementation team, as the project lead of the Weitek Group – a private firm contracted by the World Bank for the implementation of this project.

Family photograph: Mr. Bashir with his wife and children

Mr. Bashir will be remembered for his honesty, integrity, professional commitment, spontaneity and for the warmth with which he interacted with the team and his colleagues. Mr. Bashir was a constant source of inspiration for every member of the project team. He faced challenges with courage, disappointments with patience and injected immense energy into the project at critical stages. He stood for and deeply cared about the cause of the disadvantaged children in Sindh. His untimely demise saddened us all. However, his passing strengthened the project team's resolve to surmount all obstacles to honor the cause that Mr. Bashir had championed. This project is dedicated to the living memory of Mr. Bashir.

The project team intends to raise funds to support the higher education of Mr. Bashir's children. Those who want to contribute can contact the corresponding author at: sasim@worldbank.org for further details.

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Glossary

CDP	Community Dialogue Platform
CO	Country Office
EB	Executive Body
ELD	Education and Literacy Department
FMP	Field Mobilization Plan
GoSindh	Government of Sindh
HIES	Household Integrated Economic Survey
HQ	Headquarter (World Bank)
ICT	Information and Communications Technology
IFS	International Financial Statistics
IVR	Interactive Voice Response
JWT	J. Walter Thompson
M3Tech	M3Technologies
PKR	Pakistani Rupee
PSLM	Pakistan Social and Living Standards Measurement Survey
RSU	Reform Support Unit
SBM	School Based Management Reforms
SBP	State Bank of Pakistan
SERP	Sindh Education Sector Reform Program
SIP	School Improvement Plan
SMC	School Management Committee
SPDC	Social Policy and Development Centre
UC	Union Council
USD	United States Dollar
WDR	World Development Report
WB	World Bank
WG	Weitek Group

Executive Summary

Community engagement and direct beneficiary feedback can improve project outcomes under the right conditions. The World Development Report (WDR, 2004) highlighted the role of client power and voice in changing the underlying accountability relationships for improved service delivery. Over the years, interventions to improve citizen participation and social accountability have been widely supported by the Bank in various operations. In 2013, the President's delivery unit took a step forward in committing itself to incorporate beneficiary feedback in 100% of operational projects within the next five years. In this backdrop, the objective of this report is to contribute to the ongoing dialogue on achieving impact through citizen engagement. The report documents the design, implementation issues and results of a pilot project aimed at linking communities to schools. The project was implemented in three districts of rural Sindh, Pakistan, as part of the multi-faceted Sindh Education Sector Reform Program (SERP-I & II).

Sindh Education Sector Reform Program (SERP) supported the provision of annual grants to schools to draw parents and communities closer to schools. This engagement was expected to lead to the diffusion of school management powers to parents and other members of the community over time, resulting in better management of schools and improved educational outcomes. At the end of the first phase of SERP, the Government of Sindh was successful in ensuring timely transfers of these grants to more than 80% of functional government schools. However, these grants were not sufficient in eliciting and sustaining the community's participation in school management. Funds remained underutilized and in certain cases, were misappropriated. To address this problem, two interventions were designed to empower parents and communities through the provision of information on rights, roles and responsibilities and with a platform to engage in a community-wide dialogue on school-related issues via School Management Committees (SMCs).

School grants were not sufficient in inducing participation of communities in the school improvement process. This did not happen for two reasons: firstly, only a select group of individuals in the community had access to information about the amount of the school grant and the timing of its receipt. There was no mechanism in place to inform and rally parents to monitor the use of funds. Secondly, even if community members were aware of the school grant, there was limited process knowledge of roles, rights and responsibilities to engage with the school for better utilization of these grants. Essentially, an *interface* that connected the community with schools was lacking, where the government could not only provide information on school inputs, but also give parents a platform to actively lobby for school improvement and hold service providers accountable.

The interventions were meticulously designed to include the relevant active ingredients based on theory, practice and contextual understanding of rural Sindh. The first intervention provided this interface through an externally-administered (*moderated*) community-level meeting where parents and community members convened at the

community's main school. They were given information on the activities of the school, funds made available through SMC grants, and options available to them for engaging with government schools via SMCs. These meetings provided community members with a deliberative space to discuss issues related to school performance. Village meetings were very well attended by local communities with an average participation rate of 63% in treatment villages. An independent firm was engaged to mobilize the community for the village-level meeting and to moderate the discussion. The costs associated with collective action and in acquiring relevant information were fully absorbed by the private firm. The operationalization of this mechanism through an external nudge (an independent firm) is of significant policy relevance – the evaluation of this intervention, for the first time, will provide evidence to the GoSindh on the efficacy of design of the School Management Committee program, when implementation integrity is enforced by a third-party implementation firm.

The design *limitations* of the first intervention are straightforward. Firstly, in a feudal society like rural Sindh, where socio-economic power is highly skewed in favor of a few community elites, the presence and participation of community members in a village meeting might not result in an open dialogue with school administrators on education-related issues. This is particularly true for communities where teachers are patronized by village influentials and politicians, and where community members generally acquiesce to the existing power holders in the village. Secondly, the participation in these meetings is costly, particularly for daily-wage workers who might lose a large fraction of their productive time and associated earnings while attending these meetings. Thirdly, although hand-holding of village residents in organizing a community level meeting is expected to significantly lower the costs of holding subsequent meetings, the intervention does not reduce this cost down to zero.

The Community Dialogue Platform, by leveraging information communication technology, attempted to address some of these limitations. Taking advantage of the high mobile phone penetration rates in rural Sindh, where more than 70% of the households have access to at least one cell phone, we developed a *virtual interface* to link communities to schools through their phones – the Community Dialogue Platform (CDP). The platform facilitated and enabled an anonymous two-way communication channel between communities and the schools. Once community members registered for the *Community Engagement Campaign* in a village-wide orientation session, they were able to receive text messages from the moderator and could also respond to the information sent to them by sending a message back to the platform. A weekly summary of all communication on the platform was sent to registered members in the village. The platform significantly reduced the transaction costs associated with acquiring and exchanging information on school-related issues, with information arriving almost free of cost on a user's phone. Furthermore, those parents who were unable to attend any subsequent school-level meetings could stay informed about any developments through this platform, and could potentially engage in a dialogue with the community and school committees. Since the design of the intervention created a feedback mechanism enabling communities to receive information and engage with schools via school committees, this intervention falls within the broader class of citizen-

feedback models that combine information technology with grassroots institutions (school committees) for improved service delivery.

The design of the CDP intervention sufficiently captures the key elements of citizen-feedback models globally, adapts them to the ground realities of rural Sindh, and evaluates impact using a randomized control trial. Previous experiences of similar interventions, like the Check My School Program, a citizen feedback platform in Philippines; Daraja, citizen monitoring and feedback initiative on water services in rural Tanzania; and Map Tandole, an interactive map to provide detailed information on education, health, water, accessibility and security needs to communities, clearly demonstrate the potential of ICT initiatives in fundamentally altering the underlying accountability relationships between the state and service providers. However, rigorous evidence on the impact of such initiatives is still lacking.

Iterative adaptation through repeated testing was central in kindling and sustaining the interest of the community in participating in the initiative. Equally important were factors such as hands-on support and guidance provided by an intermediary firm in introducing the community to the new mechanism; the identification of local champions (*community volunteers* and SMC members) to support, spread and encourage the use of this platform; and the availability of multilingual text support to cater to the dominant local languages spoken in rural Sindh.

The novel element of the field experiment was to link citizen-voice mechanisms with grassroots institutions like school management committees to empower and enable citizens to affect positive change in service delivery. We followed, a *360 degrees design approach* for this project. Mobilization efforts, village-level meetings, and dialogue initiated on the CDP were all attempts to raise awareness and process knowledge of the community in order to enable them to effectively engage with the school. Community-identified needs were relayed to the elected representatives of school committees through this dialogue and the community was encouraged to proactively monitor the use of funds. We deliberately designed interventions to create a self-sustaining community-managed loop to identify, manage and monitor school improvement activities with little dependence on line departments. This is particularly important in the context of rural Sindh where quality of governance and governmental administrative capacity is highly constrained and has historically contributed to the capture of SMC funds by vested interests.

The design of both of these interventions depended on a functioning school committee which is properly constituted and has the capacity to implement school improvement activities. One potential scenario would have been to solely focus on citizen-voice mechanisms and expect outcomes which are in line with standard political theory – the process knowledge, awareness, and monitoring of funds by the community, over time, will lead to the dismissal of weak members and induction of more informed community leaders, thus strengthening the school committee as an institution. Another possible scenario was to intervene and accelerate this process by conducting fresh elections, inducting new members and building their capacity to undertake school improvement activities. Both of these approaches have their merits and de-merits with strengths varying from one context to

another. The field experiment gave us an opportunity to empirically test the relative effectiveness of these differing approaches in rural Sindh through a crossover design – almost half of the villages in each treatment were crossed over with elections and capacity support for the executive body members of the school committees.

The successful implementation of project intervention entails two key elements. First, the treatment providers must have the requisite capacity to implement the intervention as it was designed. Second, a large number of target participants must receive the relevant treatment as intended. The former is relatively easier to achieve than the latter. Two specialized private firms, with demonstrated prior experience, were hired to support the design of materials and community mobilization efforts. We were concerned about the possibility of the firm shirking its responsibilities in order to reduce implementation costs – something which has happened in the past in similar contracts funded by the Government of Sindh. Therefore, multiple safeguards were put in place to discourage any such behavior. For a the village-level meeting to be considered acceptable, at least 60% of the households in the treatment community were to be gathered; otherwise, a revisit was required and the meeting re-organized. In addition, measures were put in place to ensure that treatment providers (field facilitators) were able to execute the treatment and convey the messages to the community as intended. This was achieved through standardized intervention protocols, delivery methods, and intensive in-class and field-based training. Furthermore, compliance with these protocols was monitored on a sample-basis during implementation period by a third-party monitoring firm. Periodic feedback from the monitoring firm and regular supervision by the project team was critical in preventing drift and keeping implementation on track.

Field teams followed a standard agenda using a meeting script to conduct these meetings. First, an attendance sheet was filled out and a group of students from the school was called upon to showcase a short performance. Following the students' performance, facilitators gave a scripted introduction to explain the purpose of the meeting. After this, a ten-minute long audio clip in the form of a dramatized narrative was played on a portable speaker to highlight the importance of education and introduce meeting participants to the concept of school committees. Central themes highlighted by the audio clip included the purpose of the school committee, its structure, membership and amount of funds available to the school committees. These themes were reinforced and recapped at the end of the audio clip though a flipchart presentation. This part of the introductory structure was the same across both treatment arms. Once introduced to the concept of the school committee, the second part of the meeting focused on ways in which the community could engage with and leverage the committees to bring about school improvement. For the first treatment arm, this was done through a second audio clip played with an accompanying flipchart presentation highlighting the specific actions participants can take to improve educational outcomes. This was followed by a facilitated discussion between community members, parents and executive body members. For the second treatment, when the first audio clip ended, the participants were introduced to the text-based Community Dialogue Platform. The concept and purpose of the community platform was also explained through a short recorded audio clip supplemented with a flipchart presentation. Afterwards, participants

were given a real-time demonstration where selected participants responded to a multiple-choice question sent to their mobile phones through the community dialogue platform – the responses received on the platform for each village meeting were summarized and sent back to all the participants in the form of a summary message during the meeting.

Almost half of the villages in each of the two interventions were crossed over with elections and capacity-building support. Villages falling in these treatment cells were given field-level facilitation to conduct democratic elections of school committees as per the protocols stated in the official guidelines. 98% of the villages in the treatment sample were able to conduct elections. In remaining villages, where sub-district officials did not show up or field teams were met with serious political resistance, the elections had to be cancelled. The newly elected members, along with the head teacher who co-chairs the school committee, were provided with hands-on training on the core principles through three structured Executive Body (EB) meetings. The first meeting was essentially a recap of all the information that was provided in the village-level meeting while acclimatizing the elected-members to the functions of the school committee. The second meeting involved participatory training to develop a School Improvement Plan. Participants were guided on, and filled out a school improvement chart. The facilitators guided the discussion on filling different fields of the chart with the help of a model plan prepared for a typical primary school in Sindh. In addition, the elected members of the executive body were given an overview of their roles and responsibilities. The third and final meeting focused on finalizing the school plan drafted during the second meeting. This meeting was also used to explain the process of ratifying the plan in a village-level meeting. In the end, the elected members were given training on withdrawing funds, navigating the procurement process, book-keeping and on monitoring the implementation of activities listed in the school improvement plan.

For the CDP intervention, the contact information of participants was used to create a virtual database of community members, parents and school committee members for each village. The information contained in the second audio clip (for treatment 1) was broken down into a set of short and comprehensible text messages. Each message was carefully crafted in order to send one complete piece of information at a time. Comments, opinions and complaints received from community members were summarized on a weekly basis and this summary was blasted back to all participants in each village. Midway through the campaign, feedback was obtained from the community through Interactive Voice Response calls. This was followed by another round of credit transfer and informational messages to reinvigorate the dialogue, refocus it on the school committees and prevent any drift. The campaign concluded by providing names and phone numbers of executive body members to registered participants.

The dialogue generated by the platform gives us micro-level insights into the nature, scope and extent of education-related problems faced by local communities in rural Sindh. One of the common themes in the dialogue was the need for regular maintenance of buildings, classrooms and toilets. In addition, communities expressed concerns about the shortage of teachers, non-teaching staff and basic facilities like drinking water supply, boundary walls, furniture, fans and electricity. Numerous villages expressed concerns

regarding low-quality teaching and demanded better teachers for English, Sindhi and Islamic Studies. Other concerns noted in the dialogue were non-availability of textbooks at schools, schools charging money from students for textbooks which were supposed to be provided by the government free-of-cost and a lack of regular monitoring of schools by the district and sub-district officials.

The informational messages encouraged the community to use school grants to address problems related to maintenance and repairs in schools. Some communities responded by saying that school funds were not reaching the schools from the Government. Others said that resources provided were not sufficient to undertake school improvement activities. Also, in some villages, misuse and misappropriation of the funds by appointed individuals came up in the dialogue. On the positive side, numerous villages reported that since the initiation of the community dialogue platform, the school committee meetings were being regularly held at schools. Also, some villages indicated that teacher absenteeism had gone down with proactive monitoring of teachers by the community. This is consistent with the feedback received from the automated interactive-voice-response calls, where a majority of respondents identified improvement in school facilities and reduced teacher absenteeism as key contributions of the dialogue generated on the platform.

Successful implementation of the project was the result of the ability of the field teams to canvass and mobilize a sufficiently large section of the target communities. On average, participation rates for village-level meetings exceeded the initial threshold of 60% across the two treatments. However there were variations across communities with participation rates ranging from 21% to 100%, for 10^{th} and 90^{th} percentile villages, respectively. Community meetings were reorganized in 28 villages where participation rates, in the first attempt, ended up to be less than 20% of the households in the target settlement. A large majority of participants in these meetings had access to at least one cell phone number at the household level. There were hardly any cases where those who had access to a mobile phone at the meeting did not register to the platform. Overall, average registration rate of 63% was consistent with estimates of mobile phone penetration rates reported for rural Sindh. Registration rates were estimated as the proportion of households with a cell phone at the meeting. This estimate ranged from 33% to 91%, for 10^{th} and 90^{th} percentile villages, respectively. This is indicative of variations in cell-phone penetration rates across villages in rural Sindh.

28% of those who registered for the Community Dialogue Platform were active users. These are defined as those individuals who had sent at least one, relevant text message to the portal during the campaign. The rest of the registered participants received messages and answered periodic automated calls but did not send any relevant messages to the portal. Mobile illiteracy, lack of air-time credit, and inability to understand text messages were reported by participants as reasons for not sending messages to the portal. However, even as passive users of information, the automated calls indicate that those who did not send messages to the portal still found the campaign to be useful in contributing to the village-wide dialogue on school improvement. As anticipated, the traffic generated by the portal surged in the first ten days of activity following village-level meeting, with an average of 16

messages received from a typical village during that time. Subsequently, the number of messages received on the community dialogue platform declined with total traffic of 39 messages generated by a typical village during the campaign.

The field teams reported high levels of enthusiasm and interest from newly constituted school committees in crossover treatments. The attendance rates at capacity-building meetings for the executive body members were 100%, 95% and 85% for districts Sanghar, Mirpurkhas and Matiari, respectively. It is encouraging to note that the attendance rates were sustained for all three meetings indicating participants' satisfaction with the training imparted to them. The participatory training for these three meetings aimed at supporting the executive body members in developing a school improvement plan. These plans were to be prepared in line with the funds available with the school committees. Though a typical school (median) in these districts had approximately PKR 22,000 funds available at the time of meeting, what is surprising is that a large proportion of schools reported funds that had accumulated for a number of years. For instance, the 90th percentile school in district Mirpurkhas and district Matiari had PKR 77,500 and PKR 62,000 respectively, which is equivalent to at least three years of unutilized funds. Once the school improvement plan (SIP) was finalized in the third executive body meeting we analyzed data on various cost heads appearing in these SIPs. Common expenditures across villages included planned spending on repairs of ceilings, boundary walls, gates, toilets and the repair and purchase of furniture and classroom facilities for students.

The interventions discussed in this report are intended to repair the broken feedback loop between local communities and schools via School Management Committees. To amplify the voices of citizens and bolster the impact of grassroots institutions – like SMCs – we have developed and implemented mechanisms for engaging, enabling and empowering citizens to proactively participate in the school improvement process. In one of the interventions, technology was used as a tool to reduce the transaction costs involved in acquiring and acting on information. The novel element of the field experiment is the convergence of feedback mechanisms with school management committees – the voice of the community is not only heard through these mechanisms but it is expected that community constituted executive bodies will act on these suggestions for school improvement. The results reported in this report are obtained from descriptive analysis of the process data collected for all the interventions. Quantitative results of the impact evaluation are expected to be finalized by the end of this fiscal year.

Introduction

Most Governments around the world have been successful in getting children into schools but few have been able to impart education to those enrolled (Pritchett, 2014). This large-scale government failure to provide quality education at the point of delivery is the result of weak public sector management, governance and capacity (World Bank, Project Document SERP-II). Providing high quality teacher-child experiences in each school every day calls for an active role of communities and parents in schools promoted through the School Based Management Reforms (SBM). SBM initiatives are primarily geared towards shifting administrative responsibilities and authority to the level of schools in the hope of increasing accountability and transparency of the education system, and making education services more responsive to the needs of the end-users. This "voice" of the local agents is claimed to have the power to re-shape education outcomes by affecting the level and mix of education inputs that reach the school, as well as, by improving the efficiency with which these resources are used (Bruns et al. 2011). Giving a "voice" to local stakeholders is expected to result in better learning outcomes of children enrolled in schools.

More recently, development agencies have encouraged governments and supported them in implementing reforms aimed at empowering local stakeholders in school-based management. This has led to the emergence, in some instances revitalization, of school management committees comprising of parents, community members and teachers. Thus providing beneficiaries with the ability to partake in school decision-making and to actively contribute towards school improvement. However, emerging evidence from developing countries is not very promising; even after several years of *de jure* existence, school committees have remained largely non-functional. In some cases, School Management Committee (SMC) members are not even aware of the existence of SMCs, let alone their participation in it. In other instances, when these committees are found to be functional, communities' participation in these committees remains low (Pandey et al., 2009 and Banerjee et al., 2010).

The situation is not much different in the context of rural Sindh, Pakistan. Under the Sindh Education Sector Reform Program (SERP) undertaken by the Government of Sindh (GoSindh), SMCs were re-activated as a formal channel for local communities to engage with government schools. SMCs receive grants from GoSindh worth PKR 22,000 to partake in school improvement activities. The SMC is given total control over its allocated funds and is fully empowered to withdraw these resources as and when needed to implement activities without seeking any authorization from line authorities. With more than 80% of functional schools in the province receiving grants, SMCs are institutionally established and are receiving funds from the Government every year. However, there is little evidence to support that these funds are properly – if at all – utilized at the school level.

To find a cost-effective solution to address this problem and strengthen linkages of communities with schools we have designed and implemented two complementary community-engagement interventions. The first intervention arm mobilizes the community

through an externally-administered large village-level meeting to provide information on rights, roles and responsibilities of parents and the community, and to provide these stakeholders with options for recourse in engaging with government primary schools via SMCs. The second intervention arm develops an anonymous community dialogue platform (CDP) through text messages on mobile phones, to foster exchange of school-related information to discuss issues related to school performance while being virtually connected with SMC members. Both approaches provide communities with a platform to receive school-related information, exchange their views with the community, and ensure that their chosen representatives on SMCs follow up on community's recommendations for school improvement. To address any capacity constraints at the school management committee level, we use cross-over design to layer these two interventions with transparent election of committee members, coupled with participatory training to develop a School Improvement Plan (SIP). These interventions are currently being evaluated following a design which allows rigorous evaluation of the variants.

This project builds upon a new wave of progress in using information and communications technology (ICT) solutions to empower citizens, strengthen accountability and improve service delivery. It is widely acknowledged that information provision and effective communication with beneficiaries play an instrumental role in improving governance (Coffey, 2007). In this project, we extend this thinking by creating mechanisms in which voice and accountability are central—we create an inclusive public space for dialogue and debate between communities and schools. In doing so, we facilitate freer flow of information between government, schools and communities and open up opportunities for local stakeholders to participate directly in decisions that affect them. We expect to see improvements in underlying accountability relationships resulting from stronger linkages between communities and schools. The teacher is the main instrument for learning in any school, so any changes in underlying accountability relationships, have the power to affect the teachers' effort in schools (as measured by attendance, time devoted to preparing lesson plans and other teacher-on task measures), and thereby impacting student achievement (measured by standard cognitive tests).

These interventions are of particular importance in the context of rural Sindh. Firstly, private schools are virtually non-existent, making it harder (if not impossible) for parents to withdraw their children from one school and sending them to another. In the absence of market-based accountability the only option for dissatisfied parents is to directly 'voice' their concerns and work towards school improvement. The interventions were motivated by the need to create an interface that connects schools administrators with parents, and opens up opportunities to take part in the school improvement process. This was done through a traditional face-to-face meeting between community and teachers. Secondly, we were cognizant of the plausible limitations of such meetings in a feudal society like Sindh where citizens can easily feel intimidated into acquiescence with the existing system. To address this, a Community Dialogue Platform (CDP) was created to positively disrupt the system. The platform connects community members virtually with each other and with school administrators, and provides them with a medium to receive education-related information, anonymously exchange their views with the community and ensure that their chosen

representatives in school committees work on their suggestions for school improvement. Thirdly, the objective was to elicit and sustain meaningful participation of the community in the management of schools. This could only be possible if the interface was integrated with local institutions to act on the demands of the community. For this reason, School Management Committees were strengthened through elections and capacity building support to enable those members to effectively respond to community-identified needs.

The primary purpose of this report is to record carefully the rationale and motivations behind the decisions taken by the task team during project design and implementation, and a candid discussion of the challenges faced during implementation. The report is divided into three sections. First section deals with the design-phase of the project. There are two chapters in this section. The first chapter lays out the framework and context for project design; the second chapter discusses the design and testing of instruments, the portal, manuals and training of field facilitators. The second section focuses on the implementation phase of the project. The first chapter in this section reviews village mobilization efforts and convening of village-level meetings; the second chapter documents the post-meeting engagement process through the Community Dialogue Platform (CDP); the third chapter in this section reviews capacity-building support for newly constituted SMC bodies. The third and the final section reports the key findings from collation, synthesis and analysis of the process data collected for all interventions in this project. The first chapter in this section reports descriptive statistics on measures of participation and other indicators to measure treatment fidelity; the second chapter systematically analyzes the SMS traffic generated on the portal for the duration of the campaign; and the final chapter gives detailed expenditures analysis of School Improvement Plans (SIPs) developed by SMCs.

Section 1: Design Phase

Were the interventions designed to include ingredients from theory and practice?

Chapter 1: Context and Project Design

This field experiment was designed, implemented and is being rigorously evaluated to accelerate the revitalization of School Management Committees (SMCs) in rural Sindh—an important sub-program for improvement in quality and performance of Government schools supported under the Sindh Education Sector Reform Program (SERP-I and SERP-II). Substantive weaknesses in awareness, institutionalization and capacity of SMCs at the community level have contributed to underutilization and misappropriation of SMC funds. To address these gaps, two interventions were designed to inform, enable and empower the community to partake in the school improvement process. While the first treatment arm uses community-level meetings to provide information on roles, responsibilities, rights, and options for recourse in engaging with government schools via SMCs, the second arm provides similar information and a forum for community discussion through cell-phone based community dialogue platform. Encouraged by this field experiment, the Government of Sindh has started working on developing similar citizen engagement mechanisms as part of the Sindh Global Partnership for Education project.

Sindh Education Sector

Sindh province has a population of approximately 42 million people, which accounts for roughly one quarter of the country's total population. The province has a net enrollment rate of 62%, which drops to 54% if we look exclusively at rural Sindh. There are 48,932 government schools in Sindh. 43,027 of these schools are functional, of which 42,620 have at least one teacher. 38,471 of these schools are primary schools, 2,252 are middle/elementary schools and 1,897 are secondary/higher secondary schools. Roughly, 3.65 million students are enrolled in these schools and are taught by a total of 147,945 working teachers. 141,718 of these teachers are government teachers comprising 100,858 male teachers and 47,087 female teachers.

In the context of the public education sector in Sindh, Pakistan – as is the case with other countries in South Asia – schools are riddled with problems of teacher absenteeism, high dropout rates and poor maintenance of school facilities. Under the Sindh Education Sector Reform Program (SERP) undertaken by the Government of Sindh (GoSindh), SMCs were reactivated as a formal channel for local communities to engage with government schools and to address some of these problems. SMCs receive grants from GoSindh of PKR 22,000 for primary schools to undertake school improvement activities. The administrative performance and financial management of SMCs is subject to review by parents and the wider local community. Communities are expected to approve the School Improvement Plan (SIP) prepared by the SMCs in a village-level meeting, and monitor its implementation.

Design of Interventions

This pilot project is a component of the World Bank's ongoing technical and advisory support to the GoSindh for improving the quality and performance of government primary schools as part of its medium-term, multi-pronged Sindh Education Sector Reform Program (SERP-II). The interventions piloted in select districts of rural Sindh were designed by the Bank in partnership with the Reform Support Unit (RSU), which is the implementation arm of the Education and Literacy Department (ELD) of GoSindh. The aim of these interventions was to explore concrete ways to elicit meaningful and sustained local community engagement in improving education outcomes.

Local consultancy firms, J. Walter Thompson (JWT), Weitek Group (WG) and M3Technologies, were contracted by the Bank and were closely supervised by a dedicated intervention team comprising international and local Bank consultants. The intervention team worked closely with RSU in developing materials for village-level mobilization and large-scale meetings at the village level. JWT, an advertising, marketing and communications firm, was responsible for converting the content of the meetings into standardized audio clips, distinct for each treatment arm, that were played at relevant community meetings. The social mobilization and media wing of WG was responsible for developing posters, banners, flip charts, mosque announcements and the field strategy for mobilizing the community to attend these meetings. M3Technologies, an SMS technology firm, developed and provided back-end support for implementing an ICT-enabled Community Dialogue Platform that virtually connected community members for each village in the respective treatment cells.

Fidelity to Theory and Practice

The pilot interventions were designed to find ways to elicit meaningful and sustained participation of communities in school based management. The Sindh Education Sector Reform Program (SERP-I) streamlined the processes for annual school grants to reach schools in a timely manner. However, substantive weaknesses in school management systems at the community level resulted in underutilization and misappropriation of these funds. This motivated the design of the interventions to enable and empower the community to actively partake in the school improvement process. Firstly, communities had to be informed of their rights, roles and responsibilities and provided with options for recourse in engaging with government schools. School Management Guidelines prepared and distributed by the GoSindh to meet this end had limited success in rural Sindh where a large majority of parents and communities are illiterate. Secondly, mechanisms to strengthen linkages between communities and schools were not functional on the ground. For example, School Management Committees (SMCs) with a two-tier structure – a general body comprising parents and an executive body of community-elected representatives and head teachers – was supposed to play that role. In practice however, for a large majority of schools, a bogus body of *selected* executive members existed and the general body meetings were rarely held. Thirdly, when SMCs were functional, the executive-body members lacked training and capacity to act on community-identified needs for school improvement.

Selection of Study Districts

Three districts in rural Sindh (Pakistan) were selected for implementation of these interventions. We used the Pakistan Social and Living Standards Measurement Survey (PSLM) to rank the districts on two basic education indicators: i) proportion of adults who have ever attended school; and ii) school participation rates of primary-age children (5-12 years). Also, using administrative school census data, we ranked districts on size, measured by the number of schools and villages in each district. Mitiari was ranked the third smallest district, Mirpurkhas was in the middle (ranked at 12) and Sanghar at the top end (ranked at 18th), out of a total of 28 districts in the province. In terms of education indicators, Mirpurkhas had one of the lowest levels of education outcomes followed by district Mitiari (close to the median), while district Sanghar was amongst the highest. Overall, these three districts are a good representative sample of rural Sindh and were deemed relatively safe, in terms of providing adequate security to the field teams. Intervention was implemented in a total of 287 sampled villages in these three districts.

Impact Evaluation Design

These 287 villages were randomly assigned to one of the five treatment arms:

T1 – Control: No Information or capacity-building intervention.

T2 – INFO-MEET: In this treatment arm, a face-to-face meeting of all stakeholders (parents, teachers, village influentials and council members) was organized. Information packages including audio scripts, posters and pamphlets were designed and disseminated to develop a clear understanding of the roles and responsibilities of parents and community members, and to encourage participation in school-level management and decision-making. Additionally, the participants were encouraged and given time to discuss any school-related issues during these meetings.

T3 – INFO-SMS: In this treatment arm, a face-to-face meeting of all stakeholders (parents, teachers, village influentials and council members) was organized to introduce the community to an ICT-enabled SMS platform. This platform creates a virtual network of all stakeholders in the community. Using this network, key messages derived from the content of the information package in T2 and framed similarly to *tweets on Twitter* were shared with the community. Discussion and dialogue on school-related problems in this case was induced by encouraging the participants to send back comments and feedback in response to the messages shared through the virtual platform. Periodic summary messages compiled from the comments and feedback received through the network were prepared and shared with all participants with the help of SMS blasting. Automated interactive-voice response calls were also used to gather feedback from the community regarding the dialogue platform.

T4 – INFO-MEET-SUPPORT[1]: In addition to information exchange (T2), under this intervention, 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.

T5 – INFO-SMS-SUPPORT[2]: In addition to information exchange (T3), under this intervention, school committees were reconstituted through elections as envisaged in 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 three meetings (3 hours each) were organized with the newly constituted body of school management committee with a reasonable gap between each meeting.

[1] INFO-MEET is interchangeably used with "SMC Intervention" in the report. INFO-MEET-SUPPORT is also referred to as SMC Intervention with Elections and Capacity Support.
[2] INFO-SMS is interchangeably used with "SMS Intervention" or "CDP Intervention" in the report. INFO-SMS-SUPPORT is also referred to as SMS Intervention with Elections and Capacity Support.

Chapter 2: Meeting Materials, Testing and Field Pilots

The interventions were designed meticulously so that different arms of the project not only included relevant 'active ingredients' based on theory and practice, but also tied together the micro (rural Sindh) and macro (international best-practices) contexts. This was essential for ensuring successful project implementation. The design was aligned with multiple International best practices that attempt to improve transparency and accountability at the local level. These included projects such as Check My School Program, a citizen feedback platform in Philippines; On Track, a citizen feedback system that allows residents in marginalized communities in Bolivia to report problems related to public services; Daraja, citizen monitoring and feedback initiative on water services in rural Tanzania; and Map Tandole, an interactive map used to provide detailed information on education, health, water, accessibility and security needs to communities. Using this rich knowledge base and an innovative design, the project team attempted to prevent historical limitations that had derailed earlier attempts to affect change in educational governance in rural Sindh.

Introduction to Project Design

Designing all elements of the project, calibrating its different components and finalizing all instruments for project rollout took a significant amount of time. Initial design activities began in July 2011, continuing till the end of December 2012. This 18 month period allowed for different stakeholders to come together, contribute towards the development of project tools and refine the project process so that project implementation was successful. The longest duration of time was taken by the development of the CDP, the key ICT-based solution for opening up the dialogue amongst community members, boosting their informational awareness and increasing educational accountability at the local level.

The design attempted to tackle multiple constraints faced by villagers, including skewed power dynamics at the local level, lack of transparency and accountability, low informational awareness and high opportunity costs faced by impoverished residents in engaging with schools. The project team generally, and the facilitators specifically, ensured that power was balanced across participants during meetings held as part of the project. Low informational awareness was targeted through the organization of village meetings and the sending of informational SMS messages which sought to bring the knowledge base of all villagers at par with each other. Project tools such as the CDP were designed to be inexpensive for participants to use, ensuring affordability and high participation rates. Further, an effort was made to minimize the time commitment of participants on the project so that their opportunity cost would be tolerable.

This chapter provides details on both the design of project instruments, as well as the iterative process followed during the design phase. The first part of the chapter discusses the design, content and testing of instruments developed for village-level mobilization and for village-level meetings conducted as part of the SMC and SMS interventions. The second section provides insights into the developmental process of the Community Dialogue Portal (CDP) and its testing. The third section delves into how the project trained field facilitators. The chapter closes with a brief discussion on costs associated with the different elements of the design phase.

Design, Content and Testing of Instruments for Village Mobilization and General Body Meetings

Design and Content

The intervention team took the assistance of the Reform Support Unit (RSU) of the Government of Sindh, Weitek Group (implementing partner) and JWT in the development of materials used during village meetings. Standardized meeting materials designed for the intervention included: 1) an information package; 2) audio clips; 3) flip charts; 4) facilitator scripts; and 5) a field mobilization plan. These materials were produced through an iterative process, whereby development went hand-in-hand with multiple rounds of testing and refinement. All necessary changes were incorporated in the final versions based on feedback received. The key motivation behind using a range of meeting materials was to ensure that key messages were delivered consistently across villages in an interactive way, with reinforcement of critical information.

Information Package: At this stage the design team in consultation with the local stakeholders developed a set of information messages that were to be delivered to the communities through these interventions. This information package encompassed three key aspects:

- One was to inform the community about the SMC grant and to give suggestions on how to monitor the use of these funds.
- Second was to introduce the idea of the community dialogue platform by laying down its purpose, process and uses.
- Third was to provide community members with process knowledge on what their roles and responsibilities were in terms of maintaining the transparent functioning of the SMC, and how they could contribute to satisfying the educational needs of the community.

Audio Clips: The three components of the information package were converted into audio clips. These were: i) SMC basic information; ii) CDP Demonstration and iii) SMC detailed information. The key idea during the development of audio clips was to control the quality of delivery of these messages and ensure that key messages were delivered consistently across treatment villages. Two audio clips were produced. The first one provided

information on the structure, funding sources, rules and regulations, as well as benefits of a functional SMC. The second audio clip focused exclusively on the CDP, laying down its purpose, process and uses. Based on an iterative feedback mechanism, the audio clips were revised multiple times, with the first version using a poem-based format, while the final version was in the form of an audio drama. The two principles for the development of the audio clips were that they had to provide relevant information succinctly, and that the clip itself had to be catchy and appealing to the audience. An international marketing and communication firm – JWT Worldwide – was engaged to develop the story plot in drama format and to make the clips appealing to the audience. Significant efforts were made to make the language of the audio clips legible and to adapt it to the context of rural Sindh.

Flip Charts: These were developed with the aim of recapping the content of the audio clip during village meetings, so as to make sure that no important pointers were missed by the audience. Therefore, the information provided in the flip charts was precise and easy to understand, covering all the major ideas discussed in the three audio clips.

Facilitator Script: The key motivation behind developing a detailed facilitator script was to standardize the structure of the village-level meeting. The village-meeting was divided into eight timed parts. For each part a script was prepared for the facilitator to engage with the audience. Efforts were made to keep the scripts as clear, concise and succinct as possible. This also provided the meeting with more structure and made the task of the field facilitators easier. The language used was easy to understand. Since most of the target audience was Sindhi speaking, the script was translated into Sindhi to make the language more convenient for the audience to comprehend. Further, this script was tweaked for the SMC, as well as the SMS intervention arms.

Field Mobilization Plan (FMP): An exhaustive guide to village meetings was developed. This guide served as the fundamental go-to document for project implementers in the field. While tool development and training were necessary for preparing implementation teams for project rollout, the need was felt for an overarching manual that field teams had access to in case they wanted a refresher on how different aspects of the project were to be implemented in the field. The FMP was developed over multiple iterations and included feedback from all critical project stakeholders, including the World Bank team, as well as implementing partner organizations. Once the FMP was finalized, it was given to field facilitators and their supervisory staff. This document guided all field activities over the course of the project, and was critical in its successful implementation. The FMP reduced the team's reliance on training refreshers, thereby also decreasing potential project costs.

The FMP also provided instructions on activities that field teams were expected to implement to mobilize communities for village-level meetings. It provided specific details on when field facilitators should arrive in the treatment villages, how they should undertake the final round of mobilization prior to the meeting and what precise tools and instruments

(such as audio equipment and flipcharts) they were expected to check and set up before the start of the meeting. Similarly, the FMP provided suggestions on the sequence of actions that were to be taken from the beginning of the meeting till its very end. This included do's and don't's for the meeting, so that field facilitators were aware of the things that they needed to focus their attention on (such as ensuring that the scripts were in their hands during the meeting; ensuring that children were seated at the back; and following the script provided for the audio clips), as well as issues that they should be careful to avoid, such as not saying more than they were expected to, not accepting gifts from participants and protecting the meeting agenda from disruption and drift. The FMP also provided details on how attendance was to be noted, how data was to be transferred to backend CDP operators and how the post-meeting discussion was to be moderated.

Snapshots of selected instruments that were designed for the project are provided in *Annex 1*.

Testing of Instruments

Central to the success of the implementation of this intervention was the ability of the field teams in mobilizing the community to attend the meetings. The teams made significant efforts in identifying and testing the most effective materials and activities that could be used for attracting community members to the village-level meeting. Banners, flyers and balloons were designed with the assistance of Weitek group (implementation partner). All of these materials had the name of the campaign, "*Bachon Sai Pyaar Ilm ki pukaar*" (literally translated as "the call to education is love for children"), venue and time of the meeting printed on them. In addition to these material, the team also tested four softer nudges to induce community participation: i) mosque announcements; ii) student performances; iii) rallying village elders and youth; and iv) audio tape of musical jingle with a megaphone to rally the community (this was part of door-to-door mobilization).

These materials and activities were tested in three non-sampled villages in rural Sindh. A total of three banners were displayed in each village: one at the village and the other two in front of schools. Flyers were distributed to children in the schools (on average 40 flyers per school). 10 flyers were to be fixed to the corners of each banner (at least 4 per banner). 10 flyers were to be displayed with balloons in strategic locations (school gate, local schools and community gathering area—*autaaq*). Variants of distribution mechanisms were experimented across pilot villages. In one village, instead of distributing flyers in schools they were distributed to at least 25 randomly chosen households per settlement in the village (maximum of 50 flyers). 30 balloons were strategically distributed in the village: 10 balloons together with flyers in three strategic locations; 10 balloons in the main settlement and 10 in the peripheral settlement. Mosque announcements were to be made before each of the two evening calls to prayer a day in advance of the meeting; and two calls were to be made on the day of meeting: one just before the meeting and the other two hours before the meeting start

time. The head teacher was requested to prepare a group of students for a performance at the village meeting. Finally, the field teams contacted the village elders, influentials and youth to request them to rally parents and community members to attend these meetings.

The field teams conducted focus group discussions and filled observation questionnaires to document and assess which combination of materials and activities was most effective in ensuring maximum participation from the villages. The field lessons and insights drawn from the focus group discussions were used to fix the parameters of the strategy for field mobilization. The rallying of community members by the head teacher himself and students' performance in the school were the most effective ways of eliciting community participation. In addition, mosque announcements, door-to-door campaigning with a megaphone and flyers were considered relatively more effective by the focus group participants compared to other nudges. The megaphone announcements by the field team on the day of the meeting were particularly effective in getting more female participants to attend the meeting. Further, it was decided that 25 flyers be posted across the main settlement and another 25 flyers in the neighboring four settlements per village.

Design and Testing of Community Dialogue Platform

Learning from Best Practices

The project team's first goal was to document best practices in the sector, especially in the context of ICT-supported development initiatives. Certain international Innovative grassroots programs are leveraging the power of cell phones and SMS messages to create an environment where the development process becomes more transparent, effective and inclusive. These include On Track, a citizen feedback system that allows residents in marginalized communities in Bolivia to report problems related to public services; Daraja, an innovative platform in Tanzania to bring water problems to the attention of local governments and media houses; Check My Schools in Philippines, a participatory monitoring platform that allows users to upload information on schools through a number of social media platforms; and Map Tandole, an interactive map used to provide detailed information on education, health, water, accessibility and security needs to communities. The design of the portal builds upon the experiences and lessons drawn from these interventions and was carefully vetted and reduced to feasible elements that were most relevant and amenable to the technology infrastructure and socio-economic context of rural Sindh. The team also consulted academics and practitioners who had experience in implementing technology based interventions locally[3].

Under this deliberative process, it was decided that the design of the virtual ICT-based portal should contribute to the provision of information to local community members; engage

[3] Many of these discussions and ideas generated from them are provided at the following blog: http://edupolicydialogue.wordpress.com/

them and foster dialogue among them; be easy-to-use; provide multilingual support; be relatively inexpensive to use; and more broadly, assist in improving educational outcomes at the school-level in treatment villages.

Following this, the development of the SMS-based CDP was initiated in January 2012. Over the next one year, the portal went through multiple developmental iterations. Further, this period was used to conduct field testing of the portal to assess the CDP's response to user-generated SMS messages at the village level. The next section provides details on the origins of the portal, the multiple iterations that it went through and the formal pilot tests that were conducted on it.

The CDP's Origins and Pre-Pilot Recalibration

The portal's most basic form was inherited from a previous World Bank project being undertaken under the SERP-I. After testing began, the project team realized that in terms of the objectives of the SMS intervention, the existing portal had two fundamental weaknesses. Firstly, it was designed to primarily serve as a complaint redressal mechanism, whereby, participants used the portal to inform the project team about issues that existed in the state of education at the local level. Secondly, the portal only collected contact information and other identification details on teachers, not on parents who formed one of the most critical stakeholders in the SMS intervention.

Given these weaknesses, an overhaul of the platform was necessary. A local firm – M3Tech – provided technical support for this revamp. The portal was reprogrammed to create an outgoing channel for messages, besides incoming messages that contained participant feedback. This gave the project team the capability to blast SMS messages to participants, summarizing weekly discussions at the village level, as well as to send informational messages about SMCs and the state of education to participants. The idea was to create the understanding that instead of simply registering complaints with the project team, community members should start discussing problems related to education amongst themselves and find local solutions for them. Concurrently, it was recognized that field teams needed to place a strong emphasis on this idea to ensure that participants understood the purpose of the portal. It was to be made clear that the portal should be used for discussing problems for which the local community could use its collective leverage to create solutions.

The informational messages mentioned above were primarily extracted from information included in the audio tapes. The project team broke down the script followed in the narration recorded on the audio tapes into shorter sentences of appropriate length, which were sequentially sent to villages in the form of individual SMS messages. Therefore, each SMS contained a synthesized sentence or two, combining all of which summed up the information provided in the audio tapes. The project team also had to limit the length of each message so that it would fit into one SMS. This was important because otherwise,

sentences would have gotten disintegrated and sent in parts across multiple SMS messages, resulting in potential loss of clarity in the information being sent out to villagers. The final set of SMS messages were tested and calibrated to ensure clarity. Further details on these informational SMS messages are provided in Chapter 4, and Annexes 3a and 3b.

The use of mass social communication platforms such as Facebook, Whatsapp and Twitter is common in urban centers in Pakistan. The use of these technologies has generated the cultural and technical know-how amongst urban citizens of how ICT-based social interaction mechanisms work. However, this is not the case for local communities in rural areas of Sindh, where the use of these media is highly limited. An average villager does not understand how *chatting* works, or how a dialogue about social issues can be initiated on a communal, ICT-based communication platform. Further, villagers are not always comfortable sharing their opinions with the entire community on a public forum.

To make the system user friendly, communication on the portal was restricted to being solely based on SMS. Given the high rate of mobile penetration in Pakistan (approximately 70%; Evans 2013), using SMS-based communication was the best way of ensuring that participants felt technologically comfortable while interacting through the portal. On the other hand, to give villagers the confidence to voice their opinions and share feedback, interaction on the portal was made entirely anonymous. While incoming messages were going to be received individually from villagers, the core ideas in these messages were to be shared with all community members in a respective village through a summary blasted out every week. This summary included the crux of the weekly conversation, while providing no identifiers on which villager had said what.

The scope of the portal's database was also expanded to include other stakeholders besides teachers, including parents, other community members and village volunteers. Thus, an effort was made to extricate the conversation about education from inside the school and to take it to the community. While teachers are important stakeholders at the school level, parents have a direct stake in the quality of education being received by their children. Schools as centers of learning concern all community members, not just teachers. Also, this is especially true for the existing institutional landscape, since schools are expected to have SMCs which have substantial representation of parents and non-parent community members.

Piloting the Portal

While the CDP was piloted before project rollout, testing and recalibration continued even after the beginning of the project, as and when issues emerged. This section provides insights into two major testing phases during the portal's development.

The *first major pilot* exercise was undertaken between June 6th 2012 and June 14th 2012. Piloting of the portal was tied in with the piloting phase of the entire project in the four pilot

villages. In terms of the portal, the primary aim of the piloting process was to assess the feasibility of the portal and its adaptability to local conditions. During the general body meeting, the field facilitator introduced villagers to the CDP, conducted a demonstration exercise whereby villagers were invited to send messages to the long code[4] of the CDP and thereafter, receive summary messages identifying the primary reasons behind lagging educational outcomes in the village, and finally get registered on the portal.

It was clear that steps taken during the programming phase to ensure ease-of-access (through the use of SMS) and anonymity of users were highly beneficial in getting community buy-in for use of the portal. Villagers showed concern during general body meetings about them being identified with their opinions regarding the education sector. Villagers did not wish to antagonize power holders in the government or in the informal feudal economy. However, it was strongly emphasized that the portal did not give any identifying information about participants who had sent messages to the portal. This mitigated the participants' concerns who thereafter, appeared more enthusiastic about using the CDP.

It was found that villagers were at times, more comfortable sending messages in Sindhi instead of English or Urdu. Thus, adjustments had to be made in the CDP to be able to accommodate Sindhi script, together with English, Urdu and Roman Urdu. For this purpose, the technology partner firm – M3Tech – hired the services of Motorolla to develop a script for the CDP so that it could identify, store and display all four of these language types.

Since a significant proportion of village members were illiterate, the project team was concerned that many participants would not be able to use even their mobile phones for adequately participating on the portal. Therefore, it was decided that two literate community volunteers be selected in each village who could assist villagers in participating on the CDP by helping them to send messages to the portal. The CDP was tweaked so that it would take into account the identifier code of these volunteers, indicating that they were sending a message on behalf of another participant using his mobile phone.

Field facilitators were expected to take the attendance of participants and then relay this attendance data once facilitators had reached the district camp[5]. However, it was recognized early on that disconnecting attendance from the demonstration process was not efficient, since contact numbers had to be sent to the backend operators of the CDP during the village meeting in any case. The idea was that if attendance details could be sent to back-end operators automatically during the meeting, then the need for field facilitators to collect contact information would be diminished.

[4] A long code is simply a phone number to which people can text or call. Long codes are just like a mobile phone number. The only reason why it is called 'long' is because it is longer than a short code which is a dedicated number and usually of 4 digits in length.
[5] The district camp (or office) served as the base camp for project activities.

Further, while the CDP was capable of collecting contact information from participants and transferring credit to them so that a lack of credit was not a restriction for participation on the CDP, implementing this activity in the field was more challenging than initially imagined. When villagers were asked to give their contact information for credit transfer, there was a rush towards the moderator, leading to relative disorderliness in the transfer of credit to the participants. This chaos led to mistakes being made, such as credit being transferred to the same number multiple times and not at all to other numbers.

The pilot of the CDP also tested the response time of the meeting-CDP interface. Demonstration of the CDP required accurate information (long code number) being given to villagers, quick synthesis of poll responses received by backend CDP operators and smooth blasting of the summary SMS to villagers. Further, dependent on the quality of the telecom operator, there was at times a time lag during blasting of summary SMS and these being received by participants during the General Body meeting. The wait time had to be filled by field facilitators in such a way that interest of participants in the meeting was retained and the credibility of the portal was safeguarded. Important lessons were therefore, learnt regarding the fluid transition of responsibility from the field facilitators to backend CDP managers in the context of potential technological weaknesses.

Keeping these weaknesses in mind, the project team discussed ways to automate the process so that noting of attendance and submission of attendance details was simultaneous, and transferring of credit to participants was more fluid. It was suggested that Android tablets be introduced, with a user-friendly interface that could be used by field facilitators to mark the attendance and submit these details to the CDP in real-time. With this information, the backend operators could independently transfer credit, taking significant burden off the field teams. Further, this ensured that credit was being transferred to the right contact numbers. It was also expected that the tablets would reduce the time taken to note attendance. With census information already available for the settlements being visited, field facilitators could simply mark different villagers present or absent in pre-filled attendance sheets, without having to write down all the identifying details of these participants, which is a time consuming activity.

A basic interface for Android tablets was developed, along with an accompanying guide to provide instructions on how it was to be used. Certain field facilitators were trained on its use and compatibility with the CDP was developed. To check the performance of these tablets in the field, a *second pilot* was undertaken. Two schools in two pilot villages were selected for the second pilot which was conducted close to the date of project rollout. Unfortunately however, the tablet could not deliver the desired results.

Multiple factors plagued the Android tablet's use. For example, there were issues related to internet access in pilot sites. Without internet connectivity, the tablets given to field facilitators could only be used as data storage devices without the ability to transmit the

relevant data to the CDP. This precluded real-time automation of the attendance, registration and demonstration processes. In terms of transferring credit, again, the numbers had to be sent by SMS to backend operators if there was no internet connectivity.

Beyond technical constraints however, it was recognized that field facilitators would have to undergo more rigorous training on the use of tablets to be able to exploit their maximum potential. Even with internet access, attendance appeared to take a long time. Further, the data collection partner was not comfortable with assuming liability for these devices in the field. The data collection firm was concerned that in case of damage or theft, the loss would have to be absorbed by the firm. Thus, there was low buy-in on the use of the tablet from partners who were going to utilize these devices in the field.

Under these circumstances, Android tablets were shelved, together with the Android guide, its link to the CDP and the automation of the process. Future projects should consider incorporating the use of tablets earlier in the design phase, while also recognizing constraints such as low internet connectivity and finding solutions to work around these problems. Further, it is critical that buy-in of the implementing firm is acquired for utilization and safekeeping of these tablets. These details must be built into the project contractually, between the World Bank and relevant project partners.

Overall, the results of the CDP pilot phases were highly positive. Villagers were enthusiastic about using the portal and field facilitators and backend operators were able to build sufficient confidence around its use. Once key changes to the portal had been made in light of the feedback received, all systems were cleared for rollout, field mobilization tools were developed and tested, field facilitators trained and field activities rolled out.

Inclusion through Innovation

Unlike ICT-based platforms that tie together multiple forms of social media with SMS, the Community Dialogue Platform was fully focused on the exclusive use of SMS for developing momentum in grassroots education-related governance. For example, in the Check My School program conducted in the Philippines, SMS messages were one out of many forms of data received from schools. Others included Facebook, Twitter and webpages. While this allows for a larger range of electronic options to be utilized, it also runs the risk of diluting the intensity in traffic on any one particular platform. Given low awareness of other platforms in rural Sindh, the use of these other platforms would have resulted in lower overall activity in this project.

The CDP sent a clear message to participants that SMS technology is a powerful tool for them to interact with each other. The CDP's design revolved around the use of SMS technology. This minimalistic approach to communication was an innovation that simplified engagement, and enabled participants to engage with the project more conveniently.

An important challenge that the project team had to overcome was the issue of accommodating multiple languages on the portal. High levels of illiteracy in rural Sindh would have turned the use of English as the sole language of the portal into a tool for exclusion. On the other hand, the diversity of languages in the region was difficult to cater to exhaustively. M3Tech, in consultation with the World Bank team struck a delicate balance and chose to increase the range of languages from English to Urdu, Roman Urdu and Sindhi. This inclusive approach accommodated a larger group of participants and made it easier for community members to utilize the ICT-based platform.

The portal was innovative in its ability to send out bulk messages to its users. This allowed the project team to reach a large number of participants in a limited period of time. Further, information was transferred to users in different households of the same village simultaneously, so that the information set of all users in a particular village was kept at par with each other. This enabled all participants to be able to participate in formal and informal discussions regarding education in an equitable manner.

The Community Dialogue Portal (CDP) is designed to be user-friendly for participants, backend operators, as well as for data managers. The final product that was used during project rollout could be easily adapted to evolving ground realities. Annex 2 describes various technical design features of the CDP that gave it this level of flexibility.

Tool Development and Testing for Elections and Capacity-Building

An elections script for Assistant District Officers (ADOs) was developed to ensure that they had a precise understanding of their role during the general body meeting when elections were conducted. This script provided specific prompts to district officials and critically, provided contingency planning on how officials could respond if there was insufficient interest in the community for elections. Further, to train district officials a specialized training workshop was conducted in Hyderabad, Sindh. This served not only to prepare district education officers to undertake their responsibilities during the first meeting, but also to get them onboard for the crossover intervention. Further, ADOs were provided with an honorarium to cover the travel cost of their participation in election meetings.

For capacity-building measures, scripts for the three Executive Body (EB) meetings were prepared for sample villages in the election cross-over intervention. For the first EB meeting, a handout was also developed to complement the script. This was essential to reinforce the messages given during this meeting, which was to act as a foundation for future functioning of the EB. Scripts for the second and third EB meetings were also translated into Sindhi so that field facilitators could make the meetings more inclusive and ensure that all members completely understood what was being discussed during the meeting.

Besides the broader FMP which was developed for the entire project, a smaller, more specialized Field Mobilization Plan (FMP) was also created for SMC executive body

elections. It underlined the responsibilities of project partners Weitek Group (implementing partner) who were going to facilitate the EB meetings, as well as the role of district officials in conducting the elections during the first, village-level general body meeting. It provided detailed information on how to introduce the project to village participants, information about the executive body and procedures for the election.

Training of Field Facilitators

Field facilitators were a critical part of the entire machinery of the project. They were the ones who mobilized the community to attend the village meeting, facilitated general body meetings, facilitated elections and moderated executive body meetings. Given that they were the face of the project for local communities, it was imperative that they had command over the project's language, objectives, the interface of the CDP and the field and experience in dealing with shifting field scenarios. Further, for facilitators who moderated executive body meetings in the crossover intervention, it was essential that they possessed the skills and the right attitude to moderate discussions for participatory development of School Improvement Plans.

The project team tried to make sure that community members understood that the project was not about grievance redressal. Rather, it was about fomenting dialogue amongst community members for the betterment of education in the area. Thus, villagers were requested to focus their attention on issues that could be addressed by the community itself, rather than on such problems for which solutions were not attainable solely through community action. For example, low quality of teachers is a broader issue related to formal governance, which villagers can lodge a complaint against, but not address locally: improving the quality of teachers would be difficult for villagers to achieve on their own. On the other hand, if the school required repairs, they could initiate a consultative process, include the larger community in the discussion, come up with suggestions about what should be repaired and which vendors should do this, and use SMC funds to make this happen.

Since field facilitators were in direct contact with the local communities in the target villages, it was critical that this point was first impressed upon these facilitators. Thus, the discussion on how villagers could work together to achieve local solutions to issues related to education locally was embedded in every aspect of field facilitator training. This becomes even more important in the context of the CDP, since the project team wanted to drive the point home that this was not a complaint redressal mechanism but a space for community members to have a dialogue with each other for improving educational outcomes in the village. This was essential to ensure appropriate use of the portal – which also sent periodic nudges in the form of SMS messages, preventing any drift in the conversation that could lead it away from achievable goals.

In this context, the World Bank team made intensive efforts to appropriately train field facilitators so that the project could achieve what it had set out to achieve: greater intra-

community dialogue about education, increased accountability of the SMC and enhanced awareness and concern about the state of education at the village level. Field facilitators were provided by Weitek Group (implementing partner) from a pool of enumerators. The general team of facilitators was initially trained on the materials that had been prepared for general body meetings, including flip charts and audio tapes.

There was a field component, as well as a classroom component to the training of field facilitators. In the field, the facilitators were provided instructions on how to implement the field mobilization plan (FMP), and the script that had been devised for general body meetings. This included details on where the participants should be seated, where flipcharts should be placed, who should be moving the flip charts and how best to maintain cultural sensitivity and propriety during the general body meeting. Field facilitators needed to understand exactly what their role was during the meeting and what was expected from them.

Classroom trainings had two objectives: 1) to train field facilitators on the specific use and purpose of meeting tools, and 2) to test the ability of field facilitators to implement the project. Training on project tools was a mix of a lecture as well as a video. The video was prepared by the Weitek Group (implementing partner), and it showed how a general body meeting should be conducted by field facilitators. Trainers of field facilitators had to be cognizant of the fact that the group of field facilitators comprised individuals from different places and varying backgrounds. Thus, trainings had to be adjusted to ensure that all field facilitators were on the same page. Once the lecture and the video had been completed, field facilitators were asked to step up one at a time, and conduct a mock village meeting for the World Bank team using the different instruments provided to them. The World Bank team played the role of community participants, raising challenging questions for the facilitators to answer. Any facilitators who lacked a clear understanding of the delivery mechanism were retrained.

While general body meetings can be difficult to handle because of the large number of participants, executive body meetings are challenging for other reasons. They are much more sensitive and require facilitators to have a greater command of the subject matter. Firstly, field facilitators had to understand the multiple instruments used to build capacity in the executive body meetings. Secondly, given the authority of the executive body as the vanguard of the SMC, it is crucial that all five members of the executive body to attend executive body meetings. Facilitators had to ensure that power was evenly balanced across all five members and had to prevent any one member – such as the head teacher or the chairperson – from dictating the terms of these meetings. This could be done by bringing members into the conversation who might be sitting silently during the meeting through gentle encouragement to participate.

Given the need of the executive body meetings to have strong facilitators, a conscious effort was made to select the best field facilitators for these meetings. Field facilitators who performed well during the post-training mock meeting were shortlisted. After further vetting of the list of facilitators and based on the experience of each facilitator in conducting smaller, more intensive meetings, a final list of the best available field facilitators was prepared. These facilitators were requested to conduct executive body meetings in the crossover intervention.

At the beginning of project rollout, larger contingents of project staff were deployed in target villages. This was done to ensure that while field facilitators were getting the support that they needed, they were also being supervised during general body meetings. Observers would go with the team to assess the performance of field facilitators. A key benefit of this strategy was that any initial problems in the project design and/or facilitator mistakes were quickly checked. A debrief session was held with the field facilitators after every meeting during which, facilitators were given feedback on their performance and encouraged to seek guidance on challenges that they faced in the field.

Field facilitators were also invited to give suggestions and opinions to the upstream project team. If any feedback received from field facilitators applied to the entire treatment, then relevant adjustments were made in project design. In this way, a feedback loop was initiated which allowed any residual, design weaknesses to be addressed at the start of project rollout. Also, additional support for and supervision of field facilitators allowed them to learn from their mistakes and improve their performance early on in the project rollout.

Design Costs for Each of the Interventions

Project costs associated with the design of instruments for each of the three interventions are shown as "Total Fixed Development Costs" in Annex 8. The three primary cost items within the design phase were development of audio tapes, printing of pamphlets and posters, and costs associated with staff time allocated to each of the three interventions. JWT (partner organization) was responsible for the production of audio tapes; Weitek Group (implementing partner) was responsible for printing of pamphlets and posters; and all project staff and consultants were managed and compensated by the World Bank. Consequent staff costs were incurred in the form of consultant and staff fees, both in the World Bank headquarters in DC, as well as in the Pakistan country office.

Since development of project tools for the three interventions happened simultaneously, we spread the overall staff time costs across the three interventions equally. This cost was USD 2,803 per intervention in the Pakistan country office. Staff time costs incurred at the headquarters were USD 22,088 per intervention. The project was designed by the team based in the HQ with support from country office.

Development of audio tapes cost USD 1,037. Two-thirds of this cost was incurred in the development of audio tapes for intervention 1, while one-third of the cost was incurred for intervention 2. Printing of pamphlets and posters cost USD 1,500 for each of the SMC and SMS interventions. Overall, design activities cost the project USD 27,083 for intervention 1, USD 26,737 for intervention 2 and USD 24,891 for the crossover intervention.

Chapter 3 moves beyond designing and pilot testing and explores actual project rollout in the context of the first set of activities: community mobilization and general body meetings.

Section 2:

Implementation Phase:

Were the treatments implemented as intended?

Chapter 3: Community Mobilization and Village Meetings

The project employed a triad approach, implementing three interventions – one building off the other – in its attempt to achieve the objective of improving local educational outcomes in rural Sindh. While the first of these interventions brought the community together in an open dialogue, the second created a virtual network to sustain this dialogue. A third went further to increase the capacity of local communities to successfully manage SMCs and allow this dialogue to bear fruit. The first of the rollout activities which were common across the three interventions were village-level general body meetings. Meticulous project design and piloting ensured that few unexpected roadblocks appeared during rollout. This section provides an overview of implementation of village meetings across the three interventions, also shedding light on key differences across them.

Description of Interventions

The core intervention being evaluated is community engagement to revitalize SMCs under two distinct mechanisms: i) a community-level meeting to engage the community in a dialogue for school improvement via SMCs and ii) a virtual network of community members to engage in a similar dialogue supported through text messages on cell phones. The first intervention arm makes use of an existing social platform, enabling community members to participate in traditional meetings to acquire information and engage the community in dialogue and discussion on school-related issues. The second arm has created an innovative virtual platform through which registered community members receive school-related information, anonymously send text messages about these issues and receive a summary of key observations or issues twice every month.

By cross-cutting these two treatment arms with elections and capacity-building support (training to prepare a SIP) for the executive body of SMCs, we can uncover complementarities that might exist between community-level dialogue and the capacity of the elected-tier of SMCs to respond to community-identified needs. These interventions have been implemented within rural communities in treatment villages, following a design which facilitates rigorous evaluation of the variants.

Community Mobilization

Parents of children enrolled in school, school teachers and representatives of school committees were the primary stakeholders targeted for the two interventions. To mobilize a maximum number of local community members, mobilization teams were tasked with visiting target schools and villages two days before the meeting. The census database was used to acquire contact information of head teachers in target schools. These head teachers were then contacted and made aware of the objective of the visit in advance. Further, a

template was provided to the head teacher and influential community-level stakeholders, seeking their opinion on the best day, time and venue for the meeting.

Figure 1: Community Mobilization for Village-Level Meeting

Field teams were instructed to mobilize at least one member from each household in the community while ensuring maximum possible participation of households whose children were enrolled in government primary schools. Social mobilization efforts to engage the community for participating in these meetings were the same across the two treatment arms. Village mobilizers pasted posters of the meeting time and venue at key spots in the village, two days in advance of the meeting. In addition, to garner the interest of the community, the field mobilizer went around the village playing a catchy jingle and announcing the time and venue of the meeting using a megaphone. The mobilization teams also made mosque-level announcements with a script shared with them by the intervention design team. The head teacher was informed five days in advance and was asked to tell children to bring their parents to the meeting. A group of students in every school was also tasked with preparing a short performance for the village meeting.

Village-Level Meetings (INFO-MEET)

Figure 3: Attendance taken once villagers had settled down

Participation rates in village-level meetings were largely satisfactory with attendance rates upwards of 60% of the size of the community for most of these meetings. Where attendance rates were very low or mobilization efforts were not successful in the first attempt, the meeting was reorganized. 17 villages fall under this category.

Figure 2: Performance by Student Group

The meetings were facilitated by a team of two individuals. First, an attendance sheet was filled. The attendance sheet included household details as well as the participants' mobile phone number, if they had one. Once the process of taking the participants' attendance had been completed, a group of students

from the school was called upon to deliver a short performance. The student performances encouraged parents to attend these meetings.

Following the students' performance, field facilitators gave a scripted introduction to explain the purpose of the meeting. The script for the meeting had a friendly and crisp tone to it. This kept the atmosphere amicable while also taking account of the time constraints faced by participants at the meeting. The two field facilitators introduced themselves and spoke briefly about the purpose of the meeting. Next, the field facilitators proceeded to play a ten minutes long, pre-recorded audio clip containing a story-telling drama in the form of a narrative. This was done using a portable speaker.

The audio clip highlighted the importance of education and introduced meeting participants to the concept of SMCs. Central themes highlighted by the audio clip included the purpose of the school management committee, its structure, membership and amount of funds available to the SMC. These themes were reinforced and recapped with the aid of a flip-chart presentation. This part of the introductory structure was the same across both treatment arms.

Figure 4: Audio Tapes Played for Participants

Once introduced to the concept of the SMC, the second part of the meeting focused on ways the community could engage with and leverage SMCs to bring about school improvement. For the first treatment arm, this was done through a second audio clip that highlighted in detail specific actions that could be taken by participants to improve educational outcomes. This included, firstly, regular participation in the SMC general body meeting for ratification of the school improvement plan, reviewing and discussing the performance of teachers and school committee members and rallying of community members to bring out-of-school children to schools.

Secondly, the audio clip emphasized the need for parents and the broader community to take active interest in the schooling of their children. They were encouraged to make regular visits to the school to see whether teachers were present and engaged in the process of teaching. Further, they were asked to take stock of any facilities needing repairs, ensuring that their findings were reflected in the school improvement plan. They were also advised to actively track the progress of activities listed in SIP.

Thirdly, the audio clip suggested ways in which community members could contact representatives of SMCs: members present in the meeting were introduced and their contact numbers shared with the participants on a take-home brochure. The messages in the audio clip were reinforced using a flipchart presentation. This was followed by a facilitated

discussion amongst community members, based on the structure introduced in the audio clip as a means of demonstrating the benefits of community dialogue for greater awareness about school-related issues.

At the completion of the general body meeting which was facilitated by project staff, community members were highly encouraged to organize a second, non-facilitated general body meeting to take the discussion forward. It was emphasized that this second meeting which was to be conducted by villagers independently, was crucial for sustaining the conversation around education at the local level, as well as for allowing villagers to learn to conduct such broad-based, transparent and inclusive meetings on their own.

Village-level Meetings (INFO-CDP)

For the second treatment arm, once the first audio clip ended and was recapped with the use of flip charts, the field facilitators introduced the participants to the SMS-based Community Dialogue Platform (CDP). The concept and purpose of the CDP was also explained through the use of a second short audio clip, followed by a field facilitator illustrating the concept using a flip chart.

Figure 5: Audio clip summarized with the help of flip charts

Following an introduction to the concept of the CDP, participants were given a hands-on demonstration of the virtual platform. For demonstration purposes, 5-10 participants at the meeting who had credit balance in their mobile phones were selected to receive a multiple-choice format question from the portal: "What is the main issue facing your school?". This question was translated into the local language. The participants were requested to respond in real-time with answers ranging from lack of facilities at the school, to teachers' attendance and quality of learning.

A summary message was then prepared and blasted back to the participants in real-time. This summary message mentioned the option chosen by the majority of demo-participants (for details on the technical design of the CDP, see Annex 2). One of the participants was then asked to read out the message received from the portal to all those present at the meeting. This provided attendees with a real-time sense of the key features of the CDP: (i) customized summary messages capturing key discussions, (ii) anonymity of senders in the summary message and (iii) quick turnaround in terms of feedback.

Registration of participants to the CDP followed an opt-out design. Participants were requested to provide phone numbers when attendance was being recorded. After the demonstration, they were given the option to have their numbers removed, in case they did not want to register for the CDP. Hardly any of the participants chose to unsubscribe from the CDP.

Figure 6: Demonstration of CDP

Encouragement measures were adopted to mitigate any risk of exclusion due to non-affordability of mobile phone credit and low-level of mobile-phone literacy to send text messages. Nominal credit balance was transferred once at the start of the project and again, midway through the campaign. Also, during the meeting the participants selected two literate village-level representatives (called "community volunteers") to support the campaign. These volunteers were given hands-on training by the field team to help community members in typing and sending messages and to encourage them to actively contribute to the discussion on the platform.

Figure 7: Selection of Community Volunteers

Each volunteer was allocated a unique code. Community volunteers were expected to help community members send messages from their own phones. In order to know that a community member was being facilitated by a volunteer, the message sent from the community member's mobile phone should have the unique community volunteer code at the beginning of the message. Using this, the project team could track the number of messages expedited by volunteers and the number of active and passive volunteers in each village. Chapter 7 provides an analysis of these numbers. To incentivize community volunteers to perform their duties, the two were rewarded with mobile phone airtime credit in proportion to the amount of SMS messages each of them helped generate.

After the selection of two volunteers, an open discussion was conducted by the two project field facilitators with the participants. The aim was to solicit questions and feedback on the meeting. Further, the discussion allowed villagers to have a facilitated, open-ended conversation amongst participants regarding the state of schools in the area, as well as how local community members could come forward and contribute to their betterment.

The entire workflow of intervention 2 (INFO-CDP) is illustrated in "Annex 4b: Workflow Diagram – Intervention 2 (CDP)".

Capacity-Building: Elections and Support

Exploiting large sample sizes – which were the strength of the study – both treatments were crossed-over with capacity support for School Management Committees. As part of village-level meetings, villages falling in these treatment cells (across mechanisms 1 and 2) were given field-level facilitation to conduct democratic elections of SMC members, as per the protocols stated in official SMC guidelines. The respective sub-district government official was provided with an honorarium to attend the meeting and to submit a bank statement indicating the transfer of authority over funds to the newly elected chairperson, parent member of the SMC. Most of the villages in the treatment sample were able to conduct elections. However, in two villages where sub-district officials did not show up or field teams were met with serious political resistance, the SMC elections were cancelled.

The newly elected members (along with the head teacher who co-chairs the SMC) were provided hands-on training on the core principles of the SMC through three structured meetings conducted over a period of three weeks. The first meeting was essentially a recap of all the information that was provided in the village-level SMC meeting along with acclimatizing the elected-members to the functions of SMCs.

The second meeting provided participatory training to develop a school improvement plan. This was done by working with the participants on filling out a school improvement chart. The facilitators guided the discussion by illustrating how to fill different fields with the help of a model SIP chart of a representative primary school in Sindh, shared with us by the Government SMC team at RSU. In addition, the elected members of the SMC were given an overview of their roles and responsibilities.

The third and final meeting focused on finalizing the SIP chart drafted in the second meeting. This meeting was also used to explain the process of ratifying the SIP in a village-level (General Body) meeting. Finally, the elected members were given training on withdrawing funds, book-keeping and ensuring that progress on the implementation of activities outlined in the SIP was on track. A deeper exploration of the implementation of the crossover intervention and its costs is provided in Chapter 5. Snapshots of materials used in the executive body meetings are provided in Annex 6.

Project Costs associated with Community Mobilization and Village Meetings

General body meetings for the two interventions (INFO-MEET & INFO-CDP) cost a total of USD 40,000. Basic per unit meeting costs were approximately equal across the two interventions. This is the actual implementation cost of the general body meetings, excluding design, monitoring and WB staff costs. These costs included expenses incurred for arranging

the logistics of these meetings including traveling and housing, as well as costs associated with testing and piloting of material and actual implementation in the form of general body meetings.

Weitek Group (implementing partners) was responsible for general body meeting rollout, after its staff had been trained and prepared by the World Bank team. Training of staff for these meetings is discussed in Chapter 2. Costs associated with elections and capacity support are provided in chapter 5.

Chapter 4: Post-Meeting Engagement

Post-meeting engagement refers to project design features that kicked in after the initial general body meeting. These design features ensured that a) the community-level dialogue that was initiated at the general body meeting was sustained, and b) intra-community conversation was continuously reinvigorated through external nudges, which also prevented drift within the dialogue. Each of these external catalysts were part of a larger feedback mechanism, which incorporated citizens' feedback and induced further community input. Post-meeting engagement created a two-way channel for villagers, whereby, they could provide their input to the community-level dialogue, receive information on what other community members were saying and be reminded of fundamental process knowledge which was necessary for navigating the institutional structures (such as SMCs) that villagers could utilize for solving education-related problems locally. This chapter explicates firstly, the process through which these instruments were used and secondly, the content of each of these catalytic nudges. It ends with a brief discussion on costs associated with these external nudges.

Activating the Feedback Mechanism

Follow-up design features which ensured post-meeting engagement were specific to the CDP and therefore, only applied to intervention two (INFO-SMS) and the crossover of elections with the CDP intervention. For the SMC intervention, follow up was ensured through the second, non-facilitated general body meeting.

Once the village meeting concluded in INFO-SMS and CDP crossover (INFO-SMS-SUPPORT) villages, contact information of participants who registered on the CDP was used to create a virtual database of community members, parents and SMC members for each village. The CDP was deployed further for four key nudges in the post-village meeting duration of the project: 1) credit transfer; 2) informational SMS messages; 3) summary SMS messages; and 4) follow-up Interactive Voice Response (IVR) calls.

A timeline of these external nudges is provided below. Since general body meetings were phased across treatment villages, while some of the nudges were employed at specific dates across all villages (such as for credit transfer), different clusters of villages followed slightly different timelines. The table below highlights average points in time when these external catalysts were activated in treatment villages over the course of the project duration.

Table 1: Timeline for External Nudges

	Weeks 1-2	Weeks 3-8	Weeks 9-12	Weeks 13-16	Weeks 17-20
Credit Transfer					
Informational SMS					
Summary SMS					
IVR Calls					

Each of the nudges were tied to each other, collectively contributing towards the final goal of ensuring sustained community engagement. The initial credit transfer incentivized participation and removed the hurdle of low mobile credit for villages to allow them to participate in the conversation about education at the local level. This was followed by a string of informational messages, to provide a context to the conversation in the aftermath of the general body meeting, allowing for dialogue initiation. Once the CDP began to receive messages from community members, the project team started blasting back a sustained chain of summary SMS messages, synthesizing the conversation at the village level while protecting anonymity of participants. This created a two-way channel whereby, participants were not only providing feedback and comments, but in fact, conversing with each other. Further, IVR calls were also made at the start of the project to provide participants with another mode of providing feedback on the project. This was followed by a second round of credit transfer, informational messages and IVR calls to reinvigorate the dialogue and to serve as a refresher on process knowledge. This feedback mechanism is illustrated in figure 8.

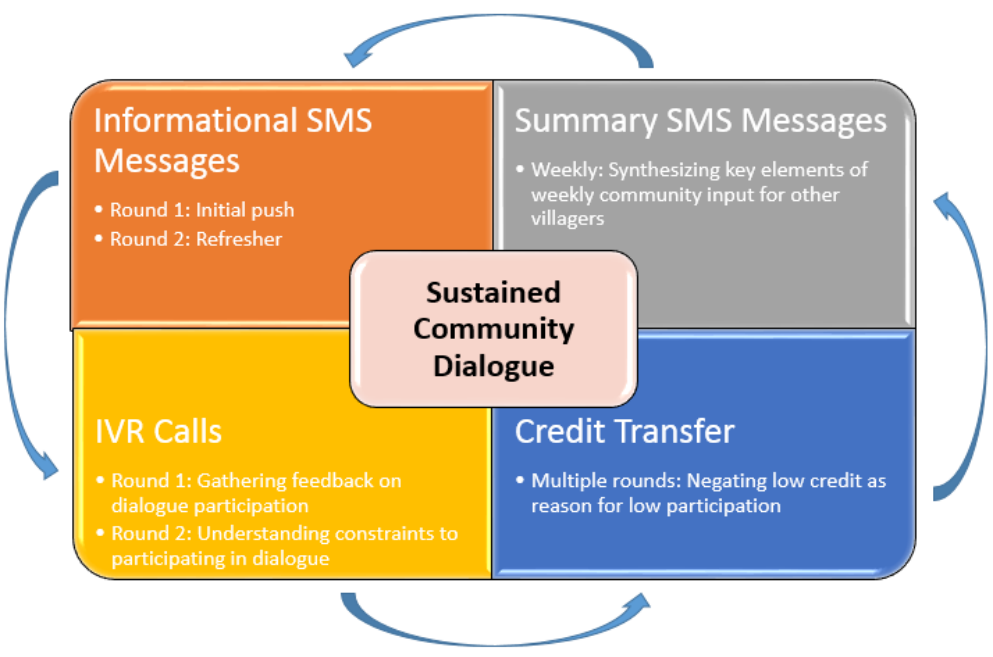


Figure 8: Feedback Mechanism for Sustaining Community Dialogue on Education

Combining all of these nudges, an iterative feedback mechanism was created and maintained to sustain the community-level dialogue initiated through the project. Details on the 'process' of each of these external catalysts are provided in the following subsections.

1) Credit Transfer

The project attempted to use innovative ways of increasing inclusiveness and participation in the project. It was felt that a lack of credit might adversely affect the ability of users to participate on the CDP. Therefore, free credit was transferred through a two-pronged approach. On the one hand, credit was transferred to registered participants to nudge individual users to participate more actively on the portal. On the other hand, two community volunteers (per village) who were elected by villagers during the general body meeting for assisting them in participating on the CDP were incentivized to catalyze interaction amongst community members in the village through the use of the CDP. This incentive was also in the form of credit transfer. Village participants were provided with a flat PKR 30 each, while volunteers were provided performance-based credit. Volunteers who generated traffic worth 10-20 SMS were given PKR 50 in the form of credit; PKR 100 for 20-50 SMS; and PKR 200 for 50 or more SMS.

2) Informational SMS messages

The information contained in the second audio clip regarding the CDP was broken down into a set of short and comprehensible SMS messages. Each message was carefully crafted in

order to send one complete piece of information at a time. The informational SMS messages were sent in two rounds through the CDP to all registered participants.

The first round was spread over two weeks that followed the village meeting, with 1-2 messages being sent every day. A total of 20 short messages were sent to all the registered participants. These SMS messages dealt with different elements of the SMC, including SMC funding and members' authority over financial resources; inputs such as books provided to schools by the government; the structure of SMCs including details about the election process; action planning; rules and purpose of the general body meetings; and ways in which the executive body of the SMC could be contacted and held accountable.

The second round built on the first round of informational messages. 16 SMS messages were sent to community members in total, compounding the information provided in the first round. Three central themes were focused on in the second round of informational SMS messages: (i) school improvements through the use of the SMS portal; (ii) information regarding the SMC and the SIP; and (iii) information on the functionality of the SMS portal. For further details regarding the content of the SMS messages in rounds 1 and 2, please see Annexes 3.a) and 3.b).

3) Summary SMS Messages

The primary purpose of the CDP is to give community members a voice and to boost their ability to participate in the decision-making process within the education sector at the local level. Therefore, it was important that SMS messages sent by community members were shared within the community. However, the strong demand for anonymity forced the project team to search for a balance between completeness of information and people's right to privacy. Therefore, an SMS message was blasted weekly to registered participants in a particular village, summarizing comments, opinions and complaints received from community members in that particular village. No identifying information was given, ensuring anonymity. This weekly blasting of summary SMS messages began in January 2013 and continued through July 2013.

These summary messages were sent to participants who were registered on the portal. The messages contained information on how many SMS messages were received from community members in the village over the last previous week; what community members thought was the most critical problem at the local school during that time; what things and approaches worked in the school; and what and how the community members could approach their SMC to partake in school improvement.

These summary SMS messages maintained the momentum of the CDP, and allowed community members in the village to stay connected. Thus, these summary messages

formed the backbone of the CDP. While keeping the community engaged over the period of the project, the information shared within the community strengthened the linkages of local individuals in the community with the school in the village. It also boosted community members' understanding of and interest in the local SMC.

4) Interactive Response (IVR) Calls

Midway through the campaign, feedback was obtained from the community through Interactive Voice Response (IVR) calls. The purpose of the IVR calls was to complete the feedback loop that had been started with the initial informational SMS messages. The IVR calls not only complemented these informational SMS messages, but were also used as a data collection tool.

Similar to the informational SMS messages, IVR calls were made in two rounds. In the first round, four IVR calls were made to registered participants, seeking information on participation in the village meeting, preferred language for SMS messages, village members' activity on the CDP and increase in village members' participation in education-related issues as a result of engagement through the CDP. These four calls were sent on days 1, 2, 9 and 14 that followed the village-level meeting in every respective village.

Initially, the project team had intended to conduct a solo round of IVR calls. Analysis of feedback received from the first round of calls however, indicated that a second round was useful to ensure sustainability of post-meeting engagement. Round 2 of the follow-up IVR calls comprised four calls made to community members and two calls made to village representatives who were elected during the village meeting to assist village members in their use of the CDP. The four calls made to community members sought information on community members' perception of the effectiveness of village representatives, their opinion of the most significant change that had been brought about because of the CDP project, any constraints to participation, and village members' opinion on the usefulness of informational SMS messages. The two calls made to village representatives provided them with information on their roles and the incentives structure that existed for them.

IVR calls provided key information to the project team in the days following the initial village-level meetings. The specific content of the IVR calls is covered on the following pages. Statistics on the calls made are discussed in Chapter 7.

CONTENT FOR COMMUNICATION

Outgoing messages and IVR calls from the CDP to the villagers were the catalysts for generating interaction amongst community members, and for building their trust in the platform. This section deals with the *content* of these three critical nudges.

7.1 Informational SMS Messages: Round 1

The first round lasted a total of 14 days following the village meeting. With 1-2 SMS messages being sent every day, a total of 20 informational SMS messages were blasted to participants. These messages sought to break down the information provided in audio clips that were used during village meetings. This served as both a refresher, as well as a means to keep participants engaged with the project. Further, unlike audio clips used earlier, these messages were available for reading as long as they were not deleted by participants from their mobile phones. Therefore, participants could refer to them whenever they had to remember anything about SMCs, in case getting this information from other sources was not convenient.

Information on the Project

The informational SMS messages provided key information on the project, including how participants could express their opinions and how these would be blasted back in the form of summary messages, protecting their anonymity.

SMC Structural and Electoral Regulations

Information was provided on the structure of the SMC, ensuring that participants were aware of the existence of both the general body of the SMC as well as the executive body. It was important that villages knew that they were automatically a part of the general body, so that they did not feel that they had to be a part of the process to be a member. By virtue of being parents or teachers, they had a vested interest in the functioning of the school and were thus, as much a part of the SMC's general body as anyone else in the community. Details were also provided on the constitution of the five-member executive body. It was emphasized that since the chairperson was always one of the parents in the community, village members had a strong role to play in the administrative success of the SMC.

Information was also provided on the electoral process of the executive body. It was critical that village members were given this information, since their participation in the powerful executive body could only be guaranteed through a vibrant election process. Engagement with this process is seen as a driver of interest in the functioning of the SMC. Details were provided not only about what positions were up for grabs, but precisely when and how elections are legally expected to take place.

SMC Resources

Participants were informed about the mandated annual funds that are provided to SMCs by the government. This included information on annual funding (PKR 22,000), the members of the executive body who were authorized to operate the account (teacher or chairperson) and the specific areas in which this funding could be used. In terms of non-financial resources provided to the school, village participants were informed that the Government of Sindh was obligated to provide free-of-cost books – but not notebooks – to the local school. These messages were crucial in increasing transparency and accountability of the SMC amongst local community members. Armed with this knowledge, they could keep a track of how resources received by the SMC were being expended, or in case these resources were not provided by the government, seek recourse and request these funds.

General Body Meeting

The general body meeting is the heart and soul of the SMC. This is where important decisions regarding expenditures and future plans of the SMC are made. Most importantly, all decisions are based on the majority's decision and therefore, the participation of the community in this process is of utmost importance. This is the reason why a substantive block of informational SMS messages was dedicated to explicating the function, process and benefits of the general body meeting.

Participants were informed about how many of these meetings are conducted annually, how they should be publicized and what rate of attendance is necessary for it to be able establish binding decisions. Participants were reminded about their role in these meetings and the areas of discussion that should be brought up. These included issues related to facilities at the school, teachers' involvement as well as ways in which more school-age children can be enrolled at the school. Participants were encouraged to actively engage in the decision-making process during general body meetings, as this is the venue through which the SMC gains its democratic credentials and its accountability is enhanced.

Staying Engaged with the SMC

Community members were advised on ways in which they could remain engaged with the SMC year-round. It was suggested that participants make regular school visits to ascertain the condition of the school, counter teacher absenteeism and check the quality of instruction being provided to students. Further, they should contribute to the action-planning process of the SMC, since this is the primary strategizing tool through which anything that's lacking at the school could be identified. To hold the SMC's executive body accountable for its actions, as well as to provide its members with valuable input, participants were encouraged to contact their executive body members without hesitation. This induced confidence in the community ensured that villagers understood how their actions in the context of the SMC could positively impact the provision of education to their children.

Annex 3.a) provides a translation of the informational SMS messages sent in round 1.

Informational SMS Messages: Round 2:

The second wave of informational messaging was spread across the remaining duration of the project. While multiple informational messages were sent, these could be categorized under the following three themes: SMS Portal – School Improvement; SMC Information; and SMS Portal – Functioning.

SMS Portal – School Improvement

A cluster of messages was dedicated to explaining the purpose of the portal, benefits of its use and areas in which it could be utilized. Once again, a strong emphasis was placed on the need for participants to engage the executive body and teachers at the school level. Further, participants were reminded that School Improvement Plans (SIP) were a critical component of the functioning of the SMC. Therefore, their creation and implementation should be monitored. It was reiterated that messages sent by participants to the portal would be summarized by the project team and blasted back to the community. In this way, the participants' anonymity would be maintained and they could express their opinions freely without fear of any negative repercussions.

SMC Information

This round summarized the messages sent earlier that dealt with the structure, purpose and functioning of the SMC. Participants were reminded of the SMC's constitution and their ability to affect its functioning through the sheer power vested in them by law.

SMS Portal – Functioning

A small fragment of round two informational SMS messages dealt with the specifics of the SMS portal's functioning. Participants were reminded of the contact number that they were expected to send their messages to. They were also made aware of the name and contact information of their village representative who was expected to assist them in sending and reading SMS messages.

Annex 3.b) provides a translation of the informational SMS messages sent in round 2.

7.2 Summary Messages

Each summary SMS message sent to a particular village summarized issues, opinions and suggestions that were received from the respective village. This section provides a brief overview of recurring issues and suggestions made by village-level participants. These are captured under a set of broad categories.

Infrastructure, Facilities and Amenities

Lack of adequate infrastructure was a major problem faced by many of the schools. The most prevalent among the many infrastructure-related issues was a lack of maintenance of buildings, classrooms and bathrooms, which at times rendered them unusable. A few schools were waiting for badly needed repairs in order to resume school activities. Also, a majority of schools faced a dearth of basic amenities such as clean drinking water, fans, electricity and furniture which was a source of discomfort for students, especially during the summer. Some schools which had availability of clean water, had no coolers to drink from. At times, schools did not have pumps to draw underground water with. Thus, a recurring suggestion was for more funds to be provided so that schools could install hand pumps. Certain villages complained about a shortage of support staff members such as peons and guards (*chowkidars*, in Urdu, or *patewalas* in Sindhi) at schools. Many of the villagers expressed dissatisfaction with the number of rooms that they had in their school and/or the furniture provided.

Villages at times also lacked proper access to schools via roads or defined paths which eroded accessibility to the schools and caused major inconvenience to students. There were multiple reports of schools not having boundary walls or the same being in need of urgent repairs. The lack of main gates was also frequently cited as a significant problem. Further, it was felt that students needed playgrounds in order to feel more attracted to the idea of going to school. However, schools often did not have such recreational facilities and therefore, villagers requested that funding and technical support be provided for building these. Finally, certain villages also complained about of hygiene and cleanliness in their schools.

Teaching Staff

The primary concern with regards to teachers and headmasters was of absenteeism, and many villagers believed that a decrease in absenteeism could significantly improve their village's educational indicators. Another major concern was the low quality of instruction, with villagers specifically demanding better English, Sindhi and religious ("*deeni*") teachers. Multiple villagers complained that the number of teachers at their schools was very low. For example, villagers who were sending their children to the Government Middle School Mahmood Thaheem reported that there was one teacher for 200 students, making it difficult for students to be given appropriate amounts of attention.

Given the relatively conservative culture of rural Sindh, a few villagers sought female teachers for their schools so that female students could also attend school. Punctuality of teachers was also a major concern for villagers, as teaching staff frequently came late and left early. Certain villages even complained about the unfriendly and unenthusiastic attitude of teachers. There were complaints that despite the issue being reported often, there was little to show for in terms of any improvements.

However, certain villages were happy with the way their schools were functioning and were also satisfied with the quality of education at the schools. Some villagers also applauded the efforts of the CDP project and how it had brought about positive change at their school in terms of exerting pressure on the teaching staff to perform.

Government Engagement

The government was either seen as a hindrance to better schooling or as being indifferent to the needs of the schools. Many villages reported that free textbooks had not been provided to their schools. At a few schools, teachers had even charged students a fees before allowing them to use the books provided by the GoSindh for free. Quite a few villages also felt that government officials did not make a sufficient number of visits to schools to keep a check on them. Increased visits were requested. Lastly, a small number of villagers in the treatment villages also complained about corruption of government officials due to which SMC funds either failed to reach schools or were reduced along the way.

Finances

Scarcity of funds seemed to be a major issue, with resources provided by the government said to be insufficient for undertaking required maintenance at schools. Some villages also reported misuse of the SMC funds by the appointed individuals in the executive body, while others reported that SMC funds were not reaching the schools from the government kitty. A small number of villages also requested scholarships for their students. It was suggested that such scholarships would encourage students to study harder.

School Management Committees (SMC)

According to the feedback received from participants, the functioning of the SMCs was substantially affected by the CDP project in the treatment villages. However, a certain number of villages requested an increase in the number of SMC meetings to discuss issues such as finances, enrolment and quality of education. It was reported that after the beginning of the project, SMC meetings were being conducted, with some villagers crediting the CDP for this change. Further, according to feedback received, communities' perception of the rate of teacher absenteeism had changed since the inception of the project, with villagers now more likely to take an active interest in whether a teacher was present at the local school or not.

On the other hand, in certain villages, SMC elections had historically not been held. There were also reports that no SMC meetings had been held at some of the schools. These reports were usually accompanied with requests from villagers for these meetings to be held for their schools.

Miscellaneous

There were reports that schools were being regularly misused for community meetings (*autaqs*) and weddings rather than for educational purposes. Also certain villages reported school buildings having not been used for a protracted period of time. In both cases, villagers wanted the schools to become operational for educational purposes again. A small fraction of villagers stated that village representatives were not fulfilling their duties of informing the people. This issue is also tackled further in the next section.

7.3 IVR Calls

Informational SMS messages and summary messages sent through the CDP created a strong feedback channel amongst the villagers and between the villagers and the intervention team. However, another tool was required to reach out to individual villagers directly to complete the feedback loop. The IVR platform served as this tool. The benefit of the IVR calls was that they also reached out to individuals who could not read or write, and who might have fallen through the cracks when village representatives were assisting people in the village.

There were two key constraints that emerged during the use of the IVR platform: firstly, the time duration for the pre-recorded voice message was short and therefore, villagers sometimes did not understand either the question, or the listed options. Secondly, many villagers did not have a basic understanding of IVR calls and therefore, they disconnected the call after a few seconds, assuming that the calls were not intended for them. However, since IVR calls were a complementary tool, they were only expected to serve its purpose of plugging the gaps in the feedback chain.

There were two rounds of outbound IVR calls. Details are provided below.

Follow Up IVR Round 1

In round 1, voice calls were scheduled on days 1, 2, 9 and 14 following the initial village meeting. An introductory call was made to participants, so that in the future, they would expect to receive such automated calls from the project. The introductory call also collected information on the status of households' attendance at the village meeting. This allowed for filling in the gaps in the project team's understanding of the coverage of the project in a particular village.

The purpose of the second call was to acquire participants' preferences for the language used in the SMS messages sent to them. One of the underlying goals of the project was to enhance inclusivity in local governance. This is because catalyzing a conversation regarding schooling at the village level requires a wide spectrum of villagers to be engaged. Therefore, it was important that as many hurdles were removed for the villagers as possible. This call therefore, targeted those participants who might have been struggling to participate in the

project because of a language barrier. Following this call, participants received future SMS messages in the language that they selected during this IVR call.

The third IVR follow-up call was aimed at gathering information about the participation of villagers registered on the CDP, and to understand the reasons for them staying away from project activities. It was critical that the project team understood disincentives to participation.

The last IVR call of the first round sought to gather information on whether intra-community engagement was being generated by the CDP and specifically, between which stakeholders. In a way, this call was made to ask villagers if, in their opinion, the project was achieving its short term objective of catalyzing a conversation regarding education within the community. Annex 3.c) provides a translation of IVR calls made in round 1.

Follow Up IVR Round 2

The second round of IVR calls were made in Sindhi. Once again, four follow up calls were made to participants. However, this round also comprised two IVR calls being made to village representatives.

The calls that were made to village participants were brief, and asked primarily the questions that were posed to them during the first round of IVR calls. This was done to both maintain engagement with the participants and to collect data and see if responses to certain questions had changed over time. Participants were asked about if, in their opinion, any changes had been brought about in the village because of the CDP project. This was a key question gauging perceptions of impact in the context of the project. In case participants thought that the CDP had positively affected the community, information was sought on specific areas in which these changes might have been brought about. These included school facilities, teacher absenteeism and intra-community interaction. Further, given that summary messages had been blasted out over the past few months, it was important to understand if participants found them to be useful and effective. An IVR call asked participants for their opinion regarding summary messages, which provided the project team with an important measure of the utility of these messages.

The project team also wanted to know what the reasons for non-participation of villagers could be, especially at later stages of the project. Thus, participants were once again asked about the primary cause of non-participation. Perceived reasons suggested for non-participation included lack of credit, inability to read and write and inability to understand summary messages.

Two brief calls were also made to village representatives who had been selected at the village meetings to assist participants in accessing the CDP portal. Unlike previous calls made to participants, these calls did not seek to obtain, but rather to provide information. The first

IVR call made to village representatives provided procedural information to them on how to undertake their responsibilities under the CDP intervention. The second and last IVR call made to village representatives provided them with information on the incentive structure that they faced, in terms of free credit balance. Annex 3.d) provides a translation of IVR calls made in round 2.

The impact of these external nudges on activity on the CDP are analyze in chapter 7.

Post-Meeting Engagement Costs

Cumulative costs of post-meeting engagement amounted to USD 22,565. These costs show up in "Annex 8: Project Costs" under the head "Operational Costs of Portal". Major costs associated with post-meeting engagement were SMS charges and consultants' fees for portal management. These two cost items constituted approximately 90% of all post-meeting engagement costs related to the portal.

SMS charges resulted from the use of long code, details on which are provided in Annex 2: Technical Design – CDP. This was primarily the cost of sending weekly summary SMS messages and periodic informational SMS messages to all treatment villages which were part of intervention 2 (INFO-SMS) and its crossover variant (INFO-SMS-SUPPORT). Consultants' fees include remuneration for backend portal operators and managers.

Credit transfer was a small fraction of the overall post-meeting engagement costs. Credit transfer to both participants as well as community volunteers comprised 7% of the overall operational cost of the portal. The remaining 3% of the cost was attributable to IVR calls that were made to all participants and volunteers.

The next chapter takes a closer look at the crossover intervention which combined elections with capacity support for the strengthening of the executive body. The villages selected for treatment were already part of interventions 1 and 2. However, not all villages in these two treatments were imparted capacity-building support.

Chapter 5: Elections and Capacity-Building Support

The elections and capacity-building intervention was rolled out with the aim of ensuring that the SMC was run in the true spirit of democracy and inclusiveness. Further, it attempted to provide executive body members – the vanguard of the SMC – the appropriate set of capabilities so that they could undertake their responsibilities appropriately and adequately. These objectives were formed on the belief that provision of a voice to, and creation of a dialogue amongst community members were insufficient in converting the SMC into a body which could successfully carry out its mandate of improving the local educational outlook. The need was felt for the SMC to be strengthened as an 'institution', together with providing it with stimuli in the form of concomitant interventions. This chapter provides insights into this institution-strengthening through the elections and capacity-support crossover intervention.

Rationale

The first two interventions attempted to initiate a deliberative process through which, the local community was given a voice and community members were provided with a platform to engage each other for coming up with local solutions to local problems related to education. Thus, the SMC campaign immersed local community members into the SMC mechanism that was available to them, but which they had not been able to utilize to its full potential. On the other hand, by bringing local community members on to the CDP, the SMS campaign went further than the SMC campaign to provide a platform for community members to discuss issues related to education in a sustained manner.

To stop the set of project activities here, the assumption would have had to be made that the process knowledge, awareness, and monitoring of funds by the community, over time, will lead to the dismissal of weak members and induction of proactive community leaders, incrementally strengthening SMC as an institution. Another possibility is to accelerate the process by conducting fresh SMC elections, inducting new members and building their capacity to effectively implement demands of the community. The field experiment gave us an opportunity to empirically test the relative effectiveness of these approaches in rural Sindh through the cross-over design.

The aim of the elections and capacity building intervention was to strengthen SMC as an institution through participatory training of elected SMC members. And for this, it is necessary that the vanguard of these SMCs – the executive body, the core team that leads the SMC – is democratically elected, inclusive and capable of carrying out its responsibilities. The SMC and SMS campaigns attempted to make the SMC inclusive. Using the crossover intervention, the project team tried to ensure that the executive body was democratically elected, as well as capable of doing what it was expected to do.

Description of Rollout

This capacity-building exercise was a crossover intervention in the sense that it piggybacked on the SMC and SMS campaigns and was not standalone. Out of the 119 treatment villages in the sample chosen for the SMC campaign, 57 were crossed over with the elections and capacity-building intervention. On the other hand, out of the 111 treatment villages which formed the sample for the SMS campaign, 56 villages were crossed over with the elections and capacity-building intervention.

Elections

In the crossover villages, the end of the general body meeting was followed by elections which were facilitated by the Weitek Group (implementing partner) and conducted by district officials. It was a legal necessity to have a district official present during the time of elections. In case district officials were not present, elections could not be held. This was the case in two villages. This is discussed in Chapter 8

The executive body of an SMC includes the head teacher, two elected parents (a chairperson and a parents' representative) and two elected non-parent community members. While the head teacher is automatically selected for the executive body, elections need to be held for the other four positions. Under the intervention, elections were conducted in two phases. During the first phase, participants who were parents of children enrolled at the local school self-nominated for the executive body positions. They were requested to address the other participants and garner the community's support. A round of voting followed which elected the parent with the highest number of votes to the position of chairperson, and the parent with the second-highest number of votes to the position of parents' representative. Voting was primarily based on a show of hands, with the project team ensuring that participants did not vote more than once. During the second phase, non-parent community members nominated themselves and addressed the other participants to generate support. The round of voting in this phase was used to elect two non-parent villagers with the highest number of votes to the executive body. These four elected members joined the school head teacher in the executive body of the SMC.

Recurring elections build the capacity of individuals to not only have the confidence to nominate but to have the faith of the community to be elected in a truly democratic sense. Given that many of these villages had historically not seen an inclusive elections process for the SMC, the project's field facilitators had to guide the participants on every step of the process. Aspects of the elections which might appear relatively simple, such as nominating a community member for the executive body, were at times, difficult to carry out in the field. Community members required constant, personalized encouragement from the field facilitators. More importantly, community members needed to see the benefits of participating in the electoral process. Making them understand that only they could change the state of education locally was crucial to the successful implementation of the intervention. Field facilitators were trained to play the role of guides and facilitators during this component of the crossover intervention.

The step-wise process for the transferring of responsibilities includes elections being conducted under the supervision of the ADO. Further, a legal document is produced by the ADO verifying that the election has been conducted. This document includes names and contact information for new members of the executive body. Since it was imperative that the elections be transparent and "by the book", all steps in this process were followed in letter and spirit. This was extremely important so that after the change of the old guard and the election of new executive body members, these members acquired the legitimacy and the mandate to undertake their responsibilities with confidence. This was also expected to deter any pushback from existing executive body members who might have resisted elections, fearing their own displacement from the body.

Therefore, once elections were successfully held and the new executive body had been formed, the ADOs drafted an official letter signifying that responsibility for the functioning of the SMC was being transferred to the new executive body members. This document was legal proof of the new EB and was primarily used to update the SMC's bank account details. Three copies of this document were prepared, with one given to either the head teacher or the chairperson of the SMC, the second kept for record-keeping by project partners Weitek Group (implementing partner) and the third retained by the ADO for governmental record-keeping.

Capacity Building

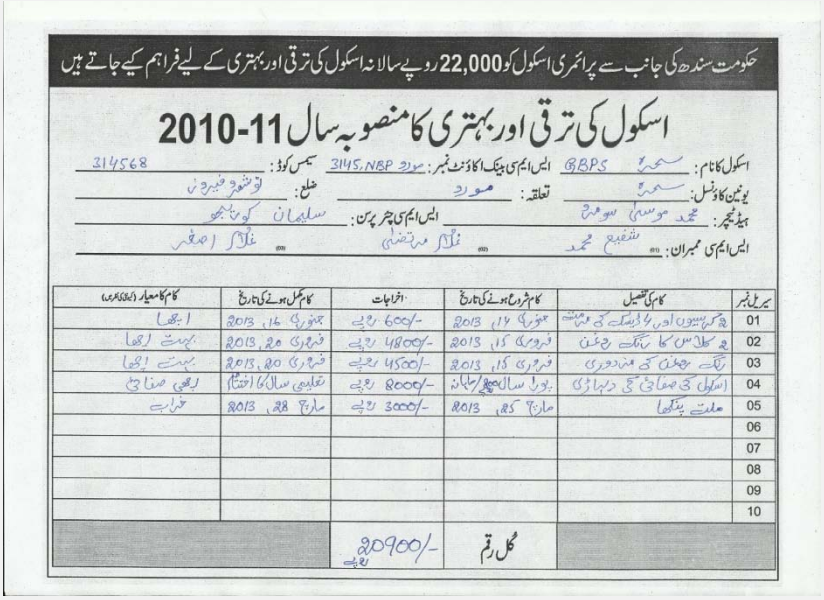
While elections of the new executive body give its new members de jure control of the affairs of the SMC, de facto power might still rest with previous members who were not willing to transfer authority of the executive body to new members elected under the project. Further, with no transitioning mechanisms and weak capacity to implement specific tasks related to EBs to begin with, newly elected members would have struggled to lead the SMC effectively. In the context of these institutional weaknesses in the SMC process, the crossover intervention conducted three intensive executive body meetings to provide newly elected members the capacity, confidence and legitimacy that they needed to run the SMC. These EB meetings were conducted in a classroom, with one field facilitator moderating the meeting.

The *first EB meeting* was used to acclimatize the new executive body members to the functioning of the body. With the help of a handout and two audio clips, EB members were provided information on their roles and responsibilities. EB members were also reminded of what was expected of them: engagement with the community; development of the SIP; fulfillment of all procedural requirements of the EB; maintenance of EB documentation; and implementation of the SIP. Since the running of the EB is a complex process, giving the EB members an overview of the EB's functions was necessary before the members dived into the nuts and bolts of the body's functioning. EB members were also requested to monitor multiple aspects of the local school's functioning. These included teacher attendance and quality of instruction, attendance of students, level of student learning and the physical requirements at the school.

The *second EB meeting* introduced new members to the SIP. The SIP is the most visible aspect of the SMC. This document provides specific information on what needs to be fixed at the school in a particular year, and how much resources will need to be spent in doing so. More importantly, the SIP ideally incorporates feedback received from the community and is therefore, the product of an inclusive process which seeks to find local solutions to localized problems. The SMC is authorized to include three types of cost items in the SIP: school repairs, labor wages for school cleaning and resources spent on transporting children to and from the school.

EB members were exposed to a dummy SIP which was in the correct format and pre-completed appropriately. Before the EB was asked to develop its own SIP, EB members had to get information on the amount of funds that the SMC already had in its bank account. The cumulative cost estimates provided in the SIP had to be less than the funds available in the bank account, or if there were none, then less than the annual grant provided to it by the government (PKR 22,000). An improvement in the project design could be that EB members be taken to the bank by field facilitators and assisted in getting information on the balance remaining in the EB's account. For this project however, EB members were requested to do this independently.

The EB members were given feedback on specific portions of the dummy SIP. This sample document served as a model for them to use when they developed their own SIP. The newly elected EB was expected to emulate this SIP in terms of its format, but fill in requirements that were specific to the local school. The dummy SIP is shown below:



حکومت سندھ کی جانب سے پرائمری اسکول کو 22,000 روپے سالانہ اسکول کی ترقی اور بہتری کے لیے فراہم کیے جاتے ہیں

اسکول کی ترقی اور بہتری کا منصوبہ سال 2010-11

اسکول کا نام: GBPS سمرو — ایس ایم سی بینک اکاؤنٹ نمبر: 3145, NBP سمرو — سیمس کوڈ: 314568

یونین کاؤنسل: سمرو — تعلقہ: سمرو — ضلع: نوشہرو فیروز

ہیڈ ٹیچر: محمد موسیٰ سومرو — ایس ایم سی چیئرپرسن: سلیمان کوریجو

ایس ایم سی ممبران: شفیع محمد، غلام مرتضیٰ، غلام اصغر

سیریل نمبر	کام کی تفصیل	کام شروع ہونے کی تاریخ	اخراجات	کام مکمل ہونے کی تاریخ	کام کا معیار (اچھا/خراب)
01	کرسیوں اور ڈیسک کی مرمت	جنوری 17، 2013	6000/- روپے	جنوری 17، 2013	اچھا
02	کلاس کا رنگ روغن	فروری 15، 2013	48000/- روپے	فروری 20، 2013	بہت اچھا
03	رنگ روغن کی مزدوری	فروری 15، 2013	4500/- روپے	فروری 20، 2013	بہت اچھا
04	اسکول کی صفائی کی دیہاڑی	یومیہ/سالانہ	8000/- روپے	تعلیمی سال کا اختتام	اچھی صفائی
05	ملتے پنکھا	مارچ 25، 2013	3000/- روپے	مارچ 28، 2013	خراب
06					
07					
08					
09					
10					
		کل رقم	20900/- روپے		

Figure 9: Sample School Improvement Plan (SIP)

Each field in the SIP was discussed with the EB members, who were asked if they had any questions related to these fields. Once every member present for the meeting had understood the purpose and format of the SIP, the task of developing an indigenous SIP

was initiated. Field facilitators conducting the meeting provided key nudges in steering the conversation towards potential requirements of the local school. More importantly, facilitators tried to ensure that the power dynamic within the EB was not skewed, and that no one member had more influence on proceedings than another. Head teachers are especially prone to hijacking such discussions, given their traditional status as the power center in schools. Facilitators periodically took the conversation away from them and to newly elected members, especially parents of students enrolled at the school.

The development of the SIP was a highly participatory process, in line with the design and objectives of the project. The moderators were present during the development of the SIP and guided the executive body members in developing the document. Further, they answered all questions posed by the members about the SIP (such as whether their cost estimates were in line with available funds), helped members understand the SIP better and assisted them in filling the template – primarily in filling the right boxes. It must be emphasized however, that facilitators adopted a hands-off approach during this phase and encouraged EB members to take complete ownership of all substantive elements of the SIP development process, such as debating what the needs of the school were, what the expected cost estimates were and whether the goals of the SIP were realistic. Thus, facilitators ensured that this provided EB members with intensive, hands-on training so that for the next SIP cycle, they could lead the process independently.

While developing the SIP, finalizing it and getting it approved by the community is in itself a protracted process, its implementation can be even more tedious. The executive body is expected to remain as transparent to the community as possible. Documentation of its activities assist in providing a record for community members to refer to if need be. However, the executive body is accountable to not just the community, but also to the government which provides it with its annual funds. The executive body is a formal organization provided a mandate by the government of Sindh to serve as the leader of the SMC – the source of the community's voice in the education sector. Therefore, all of its activities, especially those involving the use of funds must be fully documented and publicized. This is where local community members who serve on the executive body lack capacity the most, and therefore, it is critical that they are provided with adequate knowledge of the process of running the EB as well as the capability to document its activities.

Procedurally, once the SIP is finalized, it is introduced on the floor during a general body meeting. At this meeting, parents give their feedback on the EB's SIP and introduce amendments. Once the SIP has been voted on, it is put up in the school at a place where the community could view it. Its implementation is as follows. If a cost item is worth greater than PKR 5,000, the EB has to display a tender notice on the outside wall of the school for potential vendors to see. Based on vendor interest, at least three quotations are collected and compared. The cheapest vendor providing goods or services of appropriate quality is selected. A purchase order is then made which is put on public display for 15 days and sent to the office of the EDO. Acquisition of goods and services can begin during this time. Any payments made to vendors thereafter, are established through a payment voucher. Details on each payment voucher are then recorded in a cash book which provides cumulative

information on SMC funds that have been utilized and the balance that is available to the SMC. Any goods acquired through the SIP implementation process are recorded in the stock register, which is the primary inventory management tool at the disposal of the EB members. Damage or theft of these goods is also recorded in the stock register.

In this context, the *third EB meeting* was organized with the aim of a) assisting members in finalizing the SIP, and b) providing them with the capability to implement the SIP. A sample tender notice was shared with the EB members, highlighting examples of goods that could be purchased.

TENDER NOTICE

ٹینڈر برائے حصول اشیاء تعمیراتی / مرمتی کام

مندرجہ ذیل کی فراہمی کیلئے ٹینڈر مطلوب ہیں۔

اشیاء	تعداد	تفصیل	نرخ
بچوں کے بیٹھنے کے لیے کرسیاں	۱۰۰	کرسیوں کی مرمت	۱۰,۰۰۰

-1 کمپنی جو پچاس ہزار روپے سے زیادہ کی تعمیراتی / مرمتی کام یا اشیاء فراہم کر چکی ہوں درج ذیل کاموں کیلئے کوٹیشن دیں۔

-2 کوٹیشن جمع کرانے کی آخری تاریخ 10/5/2013 ہے۔

-3 اشیاء کی فراہمی ٹینڈر کی منظوری کے سات دن کے اندر ہونی چاہئے۔

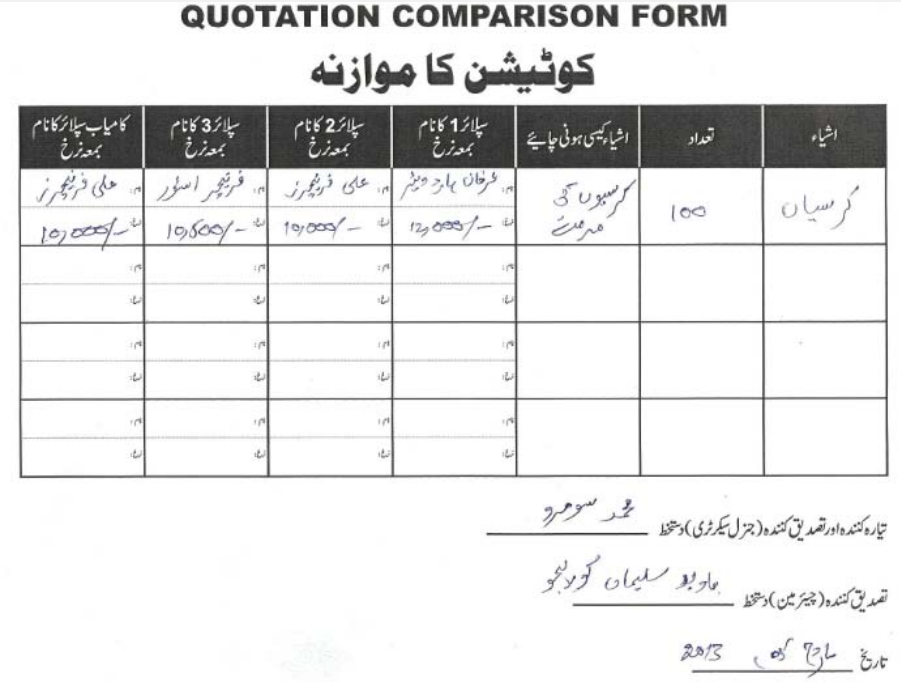
-4 تعمیراتی مرمت کی تکمیل ٹینڈر کی منظوری کے پندرہ دن کے اندر مطلوب ہے۔

از طرف دستخط عمر سومرو مورخہ 1/05/2013

Figure 10: Sample Tender Notice

EB members were instructed on how to fill the tender notices, providing details on the quantity, type and estimated cost of the item that was required (which in the case of the sample were chairs for students). This was followed by exposure of EB members to a dummy quotation comparison form. The purpose of getting quotations from potential vendors is to create competition amongst suppliers of goods and services. Theoretically, this increases accountability of EB members by ensuring that vendors were selected through a fair process, and not through personal connections. Further, it gives the SMC the biggest bang for the buck, as vendors try to underprice each other. Practically however, at the village level, at many times the vendors might be other villagers who act as masons, carpenters or the like, and who have limited understanding of the process of competitiving tendering. While the EB meetings increased the capacity of EB members to undertake the process of comparing quotations, the problem remains that local vendors might not have the capacity to participate appropriately in this competitive process. This is another example of how processes that appear to be sound in theory, can be difficult to implement on the ground.

The dummy quotation comparison form that was used to guide the EB members is provided below:



QUOTATION COMPARISON FORM

کوٹیشن کا موازنہ

اشیاء	تعداد	اشیاء کیسی ہونی چاہیے	سپلائر 1 کا نام بمعہ نرخ	سپلائر 2 کا نام بمعہ نرخ	سپلائر 3 کا نام بمعہ نرخ	کامیاب سپلائر کا نام بمعہ نرخ
کرسیاں	100	کرسیوں کی مرمت	فرحان ہارڈ ویئر 12,000/-	علی فرنیچرز 10,000/-	فرنیچر اسٹور 10,500/-	علی فرنیچرز 10,000/-

تیار کنندہ اور تصدیق کنندہ (جنرل سیکرٹری) دستخط محمد سومرو

تصدیق کنندہ (چیئرمین) دستخط عابد سلیمان گوریجو

تاریخ 2013 مارچ

Figure 11: Sample Quotation Comparison Form

A similar exercise was carried out to familiarize EB members with payment vouchers and purchase orders. Further, EB members were guided and given practice on filling the cash book and the stock register. The need to maintain these documents was impressed upon the EB members by the facilitators and a strong push was made by facilitators to ensure that EB members had the capability to complete these documents independently.

However, certain caveats are in order. The parents in the EB who wish to improve currently poor educational outcomes of the community have also gone through the same, weak educational system. For many of them, reading, writing and undertaking simple math such as adding, subtracting or multiplying can be difficult. In this context, ensuring that they abide by the requirements of all these documents is a challenging task. In terms of implementing the SIP, new EB members must not only be able to fulfill their commitment to the community and complete required documentation, but while doing so, also balance issues that are endemic to rural Sindh. For example, EB members at times mentioned that if they started spending SMC resources, they would attract the attention of local feudals who might want to acquire control of these resources. Also, spending funds meant more record-keeping. Given the protracted process that SIP implementation entailed, there is a risk of EB members spending less than they should so as to minimize the formal documentation that they need to complete.

These are some of the issues that local communities have to surmount in order to play an effective role in improving grassroots governance in the education sector in rural Sindh.

Designers and implementers of projects related to improving local educational governance should also be cognizant of these challenges so that rural communities are given the appropriate tools to organize themselves, fulfill official procedures and absorb local pressures.

Snapshots of all the different sample instruments utilized during the three executive body meetings are provided in Annex 6.

Elections and Capacity Support Costs

Overall, elections and capacity-building efforts cost the project USD 49,185. This cost is more or less evenly divided between total fixed development costs (USD 24,891) and total variable costs (USD 24,294) of the crossover intervention. Details on these costs and their breakdowns are provided in Annex 8.

The largest fraction of this cost is attributable to time charged by staff and consultants at the World Bank headquarters and the Pakistan country office. This amounts to approximately 92% of the costs of the crossover intervention. Given that designing the crossover intervention was a time-intensive process, the design phase of this, third intervention arm cost the most in terms of staff/consultant costs.

Out of the remaining USD 3,833 (8%), USD 513 were spent on the organization of a half-day workshop for ADOs. This workshop was arranged to bring district officials up-to-speed with the objectives of the project, and to emphasize the importance of their participation in the crossover intervention. This was especially important given that SMCs are legally bound to conduct elections under the supervision of district officials such as ADOs. Further USD 3,320 were spent on honorariums for ADOs, which were provided to these officials to compensate them for traveling to villages to supervise and monitor the elections process.

Section 3: Analysis

Were the treatments received by the participants and acted upon?

Chapter 6: Treatment Receipt Analysis

Community mobilization and general body meetings served to bring local community members into the ambit of the project. Once the initial participation of villagers in the target districts had been achieved, progressive pieces of the project design were rolled out to ensure that this engagement was sustained. Having set up the skeletal outlook of the project, this chapter fleshes out specifics and provides information on the magnitude of two of the three interventions: SMC mobilization and the deployment of the CDP. While the first two sections of the chapter answer questions such as "how many?" for both intervention arms – by looking at sample size, participation rates and registration rates – the rest of the chapter focuses on the CDP and nudges such as credit transfer, community volunteers and IVR calls that were implemented through it to sustain participation. The major datasets used for analysis provided in this section are described in Annex 10.

Villages by Treatment Status: General Body Meetings

The final sample of villages for intervention 1 comprised 119 villages. A total of 15 tehsils and 67 union councils were included in the treatment group for this intervention. Out of these 119 villages, cross-cutting capacity-building support (INFO-MEET-SUPPORT) was carried out in 57 villages. For intervention 2, a total of 111 villages were treated and included in the CDP. A total of 15 unique tehsils and 66 union councils were part of this treatment. Of these 111 villages, cross-cutting elections and capacity-building activities (INFO-SMS-SUPPORT) were undertaken in 56 villages. In the other 55 villages, only the CDP portal was rolled out.

For intervention 1, out of the 119 treatment villages, 47 were in district Mirpurkhas, 17 were in district Matiari and 55 were in district Sanghar. On the other hand, for intervention 2, out of the 111 treatment villages, 43 were in district Mirpurkhas, 20 were in district Matiari and 48 were in district Sanghar.

Table 2: Distribution of Sampled Villages

	Intervention 1	Intervention 2
Total Villages	119	111
Election	57	56
Non-Election	62	55
Mirpurkhas	47	43
Mitiari	17	10
Sanghar	55	58

For intervention 1, three villages were added to the sample for non-election villages, against the planned sample of 59 villages, leading to the actual sample comprising 62 villages[6]. Conversely, there was attrition of two villages in intervention 2 (one election village and one non-election village)[7]. The following table compares planned and actual sample sizes across the four types of interventions, plus the control group.

Table 3: Planned versus Actual Sample Size

<table>
<tr><td colspan="2">COMMUNITY ENGAGEMENT</td><td rowspan="3">CONTROL
(57 villages)</td></tr>
<tr><td>T1: INFO-MEET
(59 villages planned sample, 62 villages actual sample)</td><td>T2: INFO-SMS
(57 villages planned sample, 55 villages actual sample)</td></tr>
<tr><td colspan="2">COMMUNITY ENGAGEMENT PLUS SUPPORT</td></tr>
<tr><td>T3: INFO-MEET-SUPPORT
(57 villages planned sample, 57 villages actual sample)</td><td>T4: INFO-SMS-SUPPORT
(57 villages planned sample, 56 villages actual sample)</td><td></td></tr>
</table>

Participation Rates in Meetings

Average participation rates for the two interventions hovered around the 60% mark[8]. This ranged from a low of 58% election villages in both interventions to a high of 69% for intervention 2 villages without elections (INFO-SMS). Further, even across villages, there was large variation in participation rates. This is evidenced in the large gap between the 10th percentile (21%) and the 90th percentile (100%) of overall average participation rates.

[6] Oversampling occurred in this group because of the implementing partner visiting additional villages which were situated close to certain GPS points in order to prevent the relevant ones from being used.
[7] The project team faced stiff political resistance in these two villages. After efforts to overcome this problem failed, the intervention was called off in these villages.
[8] Participation rate has been calculated as % of households in village that came to a meeting. There was some erroneous matching in the field, leading to participation rates being greater than 100%. For all such villages, participation rates have been capped at 100%. Also, 15 out of 119 attendance sheets for SMC villages were not available.

Table 4: Participation Rates

	Mean	10th percentile	50th percentile (Median)	90th percentile
Overall	63%	21%	63%	100%
SMC				
Overall	62%	17%	60%	100%
Election	58%	17%	57%	100%
Non-Election	65%	19%	73%	100%
SMS				
Overall	63%	27%	63%	100%
Election	58%	22%	54%	100%
Non-Election	69%	27%	69%	100%

While the initial threshold for participation rates was set at 60%, given that matching of census data with households in the field was imperfect and average participation rates across treatment villages were almost 60% the threshold was relaxed after implementation of all the meetings. It was agreed that any villages for which the participation rate was less than 20% would have to be revisited. It is encouraging to note that the 10th percentile of participation rates is 22%, which is higher than the revised threshold of participation rates. Thus, participation rates were mostly satisfactory across the two treatment arms.

Registration Rates for CDP

The CDP portal received an estimated total of 4,981 contacts. However, a caveat is in order. Registration on the portal was a multistage, multimodal process. Contacts were received primarily during the initial village meeting. However, in certain villages, the participation rate was below the threshold of 20% of the number of households in the census. In such cases, the general body meeting was to be rescheduled and reorganized. Contact information was then recollected from these villages. Contact information acquired in the revisited villages was later added to the CDP.

Multiple sources were triangulated to arrive at a stable number for the total number of registered contacts on the portal which are represented by the 4,981 contacts, producing an average of 45 contacts per treatment village. Out of the total number of contacts registered on the portal, 2,405 contacts were registered from villages where the election sub-treatment was also crossed over, while 2,576 were received from non-election villages. Adjusting for total number of villages, averages across villages differed slightly in different treatment types, with an average of 43 contacts per village received from election villages and an average of 47 contacts per village received from non-election villages.

The overall average registration rate (fraction of number of unique, registered contacts to the number of unique households represented at village meetings) stood at 62.8%. However, there was significant variation across villages in terms of registration rates. The 10th percentile of registration rates was 33%, compared to the 90th, which was 91%.

Within districts, Sanghar had the highest average registration rate (68.4%), while Mitiari had the lowest average registration rate (53.2%). Mirpurkhas had an average registration rate of 60.8%. This variance was lower when we consider villages by treatment type. The average registration rate in non-election villages (64.9%) was only slightly higher than that in election villages (60.6%).

Table 5: Registration Rates on CDP

	Mean	10th Percentile	Median (50th) Percentile	90th Percentile
Mirpurkhas	61%	32%	63%	88%
Mitiari	53%	34%	51%	80%
Sanghar	68%	37%	72%	96%
Election	61%	30%	62%	93%
Non-Election	65%	35%	69%	90%
Overall	63%	33%	65%	91%

Given that the project sought to use the CDP as a way of generating internal conversations around education, these are significant numbers since each participant on the CDP was encouraged and prodded to reach out to others in the community to discuss issues pertaining to schools in the area. This multiplier effect whereby, registered users interacted with non-users was expected to produce a positive impact on the 'voice' of the local community. The compounding of the community's voice should increase upward pressure on the government for greater accountability and transparency in the education sector.

Credit Transfer to Participants

To account for the staggered initiation of the project in the 111 treatment villages (INFO-SMS & INFO-SMS-SUPPORT), credit was also transferred to different villages at different points in time. Credit was transferred on the following dates:

Table 6: Dates for Credit Transfer

Sr. No.	Credit Transfer Date	# of Villages
1	01 March 2013	19
2	11 March 2013	25
3	21 March 2013	28
4	02 April 2013	19
5	05 April 2013	18

The staggering of credit transfer was done based on the gradual, cumulative incorporation of different treatment villages to the CDP. However, only those individuals were provided credit who, at the time of the credit transfer, were verified to be registered on the portal. Since registration was phased and credit transfer was staggered, at times, some of the participants who were registered on the portal did not receive credit. Out of a total number of 4,981 unique registered users, 4,788 were provided with free credit, while 131 community volunteers were given incentives in the form of free credit. It must be borne in mind that there was no mechanism for validating whether participants and volunteers had received credit or not.

Participation Rates of Community Volunteers

The role of community volunteers was to expedite local participation during the use of the CDP. Volunteers were charged with generating intra-community discussion around education, as well as to assist villagers in interfacing with the CDP. This interfacing comprised of two parts: a) assisting villagers in sending messages to the CDP, and b) sending messages on their behalf.

A total of 212 unique community volunteers were part of the intervention. A fraction of these (active volunteers) were appropriately undertaking their responsibilities while the others – known as passive volunteers – were not. There were a total of 59 active volunteers, 30 of whom were in election villages, while 29 were in non-election villages. Conversely, there were 153 passive volunteers. These individuals are argued to have been part of the broader discussion on education at the village-level and in many instances, to have also sent messages as regular users, but did not directly assist other participants in sending messages to

the portal. This implies that they did not send messages on the behest of others with the correct village and community volunteer codes.

As was the case with registered users, it is important to gauge how many *villages* had a volunteer who was actively engaged with the project. Out of the 111 treatment villages, approximately 48 villages had active volunteers. Out of the 48 villages which had active volunteers, 25 were election villages and 23 were non-election villages. Therefore, 43% of the treatment villages had at least one active volunteer.

Table 7: Villages with Active Community Volunteers

Village Type	# with Active Volunteers
# of Election Villages with Active Villages	25
# of Non-Election Villages with Active Villages	23
# of Villages with Active Villages	48

Feedback Loop IVR Calls

The total number of villages where IVR calls were made was 96. A total of 4,427 participants were included in the calls, resulting in 17,708 calls and an average of 185 calls per village. Of these, an average of 131 calls per village was answered overall. Disaggregation of this information reveals that an average of 60 calls per village were answered during the first round, while an average of 71 calls per village were answered during the second round. Thus, the success rate of IVR calls during round 2 was higher than in round 1. Further details and an analysis of responses to IVR calls is presented in Chapter 7.

Chapter 7: Analysis of Text Messages

The Community Dialogue Platform created an open dialogue amongst community members regarding education at the local level. More importantly, it allowed users to discuss how indigenous solutions could be found to local problems that plague schools at the village level. Having discussed the rollout of the CDP, this chapter delves into the ensuing activity on the portal, looking at how many individuals actively used the CDP, to what extent was the CDP used by the participants across geographic sub-units and time, and how well participants responded to external catalysts such as community volunteers and IVR calls.

Active and Passive Users

The project defined active users as those registered users who had sent at least one non-junk SMS over the course of the project. Passive users are argued to be individuals who, while they did not engage directly with the portal, had their voices heard through active users. This makes intuitive sense, given that in the communal culture of rural Sindh, certain members of the community are entrusted with representing the larger community. Discussions amongst a group of individuals would not lead to all group members sending messages individually. Instead, a few people in the gathering would be entrusted with synthesizing the information generated and sending it to the portal.

Out of a total of 4,981 unique registered users on the portal, 1,399 were active users. Thus, 28% of all registered users utilized the portal directly. Treatment villages had an average of 12 active users per village. While the count of registered users provides insights into the general interest that was generated by the portal and the success of the project team in getting villagers on the portal, the number of active users is a fairer reflection of sustained interest in the portal.

It is important to understand whether the relatively low ratio of active users to registered users was an indication of a general lack of interest in the portal, or whether, as suggested earlier, the opinions of both active and passive users were being synthesized by active users. We define 'active villages' as villages where at least one non-junk SMS was sent to the portal. All 56 of the election villages are active, while 54 out of the 55 non-election villages are active. This is a highly encouraging statistic, and shows that there were no systematic issues in terms of a general lack of interest in the portal across villages.

Analysis of SMS Traffic - over Time and by District

This section provides an analysis of activity on the portal across time, aggregated at the treatment, district and tehsil levels. Moving down the three levels of aggregation throws variations across different sub-units into sharp relief.

Project rollout was phased in. The first village meeting was not held in all villages on the same day. Instead, it took a total of 48 days (February 7th 2013 – March 27th 2013) for the first meeting to be held in all treatment villages. This part of the analysis puts data 10-day buckets, with days 1-10 representing the first ten days after the initial village meeting *in a particular village*, and days 110-120 representing the last ten days of formal activity on the portal in the same village. After 10-day buckets are created for each village, these buckets are simply aggregated.

A total traffic of 5,336 messages was generated during the project cycle, with approximately one-third of the messages (1,836) being generated during just the first ten days following the village meeting. An average of 16 messages per village were sent during the first ten days, as compared to two messages during the last ten days. The initial surge occurred during a period when communities were being mobilized and informational SMS messages being sent to them. This indicates that these efforts had a significant impact on generating initial activity on the portal. However, following the initial round of informational messages, traffic on the portal dropped significantly, stabilizing at an average 2-4 messages per village in the months following project initiation. This trend is illustrated in the graph below:

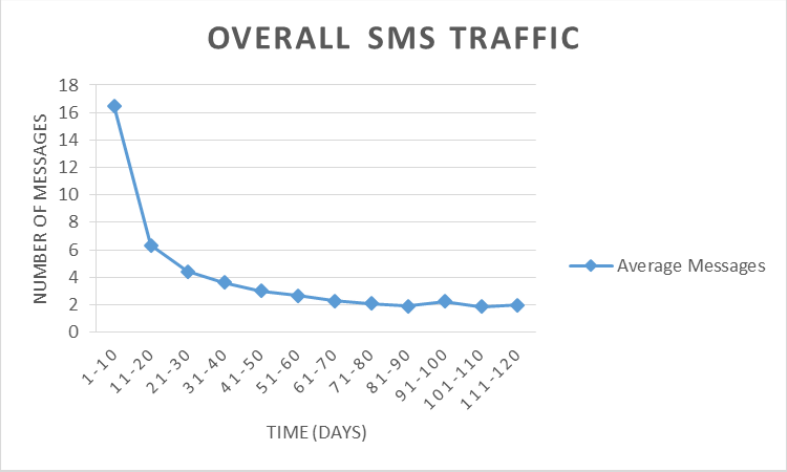


Figure 12: Overall SMS Traffic

District-wise analysis shows that the overall trend in SMS activity on the CDP was by and large, similar to individual trends in activity in the treatment districts. This is illustrated by Figure 13. There were no large differentials across districts in terms of activity on the portal at the beginning of the portal. However, at the end of the project, there were higher levels of

activity in district Sanghar and lower levels of activity in district Mirpurkhas, as compared to the overall mean. Activity in district Mitiari matched the overall mean (2 messages per village).

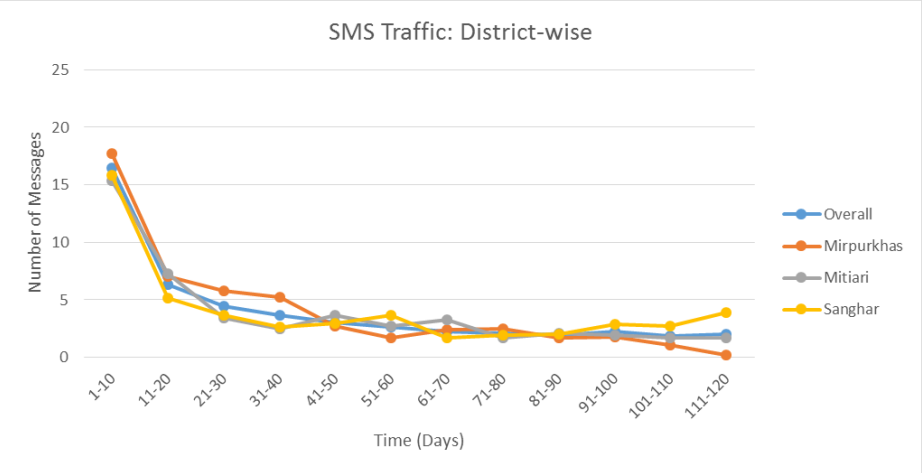


Figure 13: SMS Traffic per Village: District-wise

While overall trends look similar, the tehsil level provides rich information on potential variations in CDP activity across geographic sub-units. Out of the three tehsils in district Mitiari, tehsils Mitiari and Hala showed a higher rate of activity for the first 20 days of the project, as compared to tehsil Saeedabad. These two tehsils also showed a slight surge in activity at the end of the project. There was one significant peak during the four months, which occurred in tehsil Saeedabad during days 41-50, led by villages Chitori and Ihanjo.

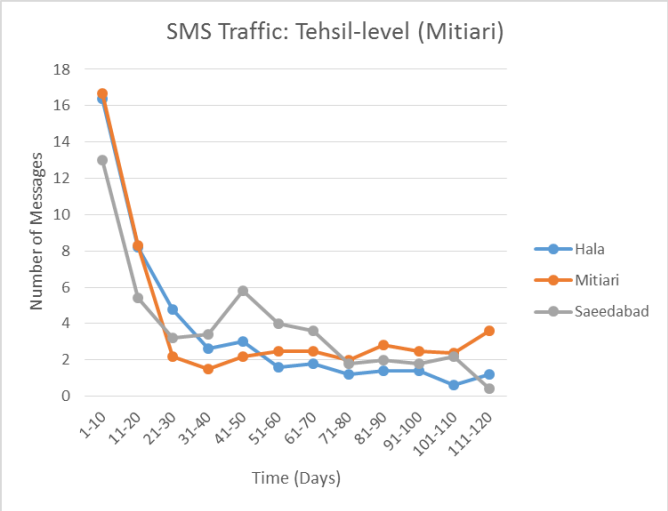


Figure 14: SMS Traffic - District Mitiari

There are 6 tehsils in district Mirpurkhas, portal activity for which is illustrated in Figure 15. While the tehsil-level trends are similar, we will focus on any existing variations. There are similarities in the trends for different tehsils, with an initial surge followed by dampening of activity. However, while trends appear to be similar, there are differences in magnitude across tehsils. For example, while an average of 23 messages per village were sent in tehsils Jhuddo and Mirpurkhas, the number was as low as 12 in tehsil Digri. Going beyond the initial activity on the CDP, significant variations occurred across the project cycle, most notably during days 11-20, 21-30, 31-40 and 81-90.

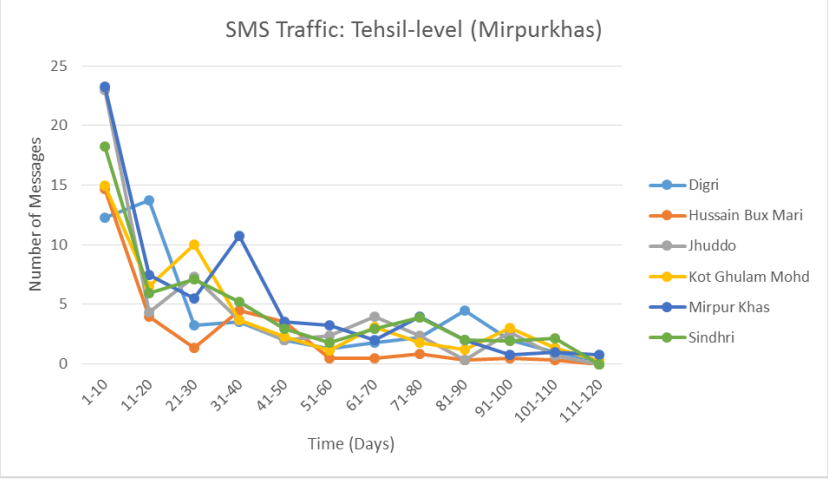


Figure 15: SMS Traffic - District Mirpurkhas

Such variations are repeated across tehsils in district Sanghar. Activity during the initial surge ranges from an average of 28 messages per village in tehsil Shahdadpur, to 9 messages per village in tehsils Sinjhoro and Tando Adam. Similar to district Mirpurkhas, significant variations occur across the project cycle. It must be noted that tehsil Jam Nawaz showed a consistently higher magnitude of activity, as compared to other tehsils in district Sanghar.

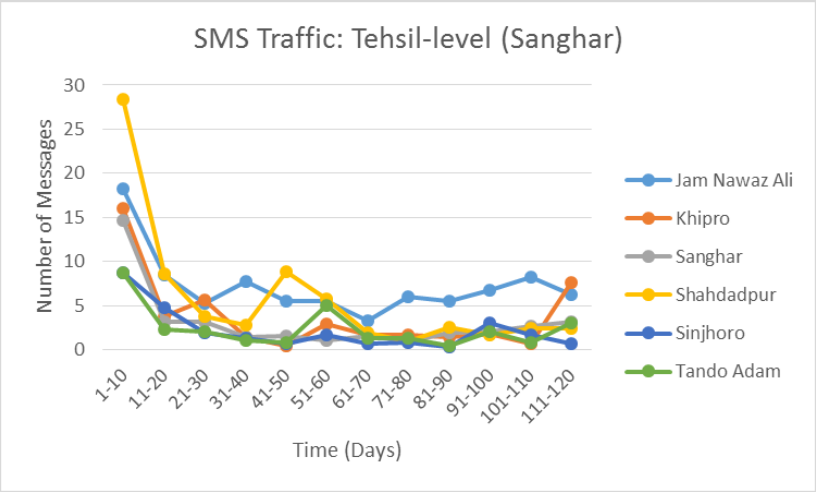


Figure 16: SMS Traffic - District Sanghar

Credit Transfer Analysis

Credit was transferred in two rounds, once initially and then midway through the project cycle. Credit transfer, together with informational and SMS messages acted as catalysts for increasing activity on the portal. While the initial surge could potentially be partially attributed to credit transfer, once the initial surge had dried up, there were no systematic jumps in activity in the target districts. Thus, the second round of credit transfers does not appear to have had an impact on portal activity.

One reason for the negligible effect of credit transfer on portal activity could be that access to mobile credit was not a critical determinant of engagement with the CDP. Between February 1st 2013 and June 30th 2013, 74% of the messages sent to the portal were junk: messages that were either incomplete or irrelevant. This strengthens the argument that lack of credit was not a major constraint for a majority of the participants. Intuitively, free credit in itself has positive spillovers in the sense that it acts as an additional incentive to participating in the project. However, these effects are not reflected by the existing data.

Activity of Community Volunteers

Adjusting for outliers and community volunteers who sent zero messages to the CDP, there were 59 active volunteers (out of 212 unique volunteers). In effect, approximately a quarter of the volunteers who had signed up for the project eventually sent messages to the portal on behalf of other community members. Volunteers were periodically encouraged through informational messages to generate intra-community interest in the project.

A total of 287 messages were sent by the 59 active volunteers (average of 5 messages per volunteer). For election villages, there were 30 active volunteers who sent 132 messages to the portal (average of 4.4 messages per volunteer). In the case of non-election villages, there were 29 active volunteers, of which, 155 sent messages to the CDP (average of 5.3 messages per volunteer). Comparing averages therefore, it is apparent that volunteers in non-election villages assisted other villagers more actively, as compared to their counterparts in election villages. It must be kept in mind however, that volunteers were only credited with assisting villagers if the messages that were received on the portal could be traced back to them: the messages were sent from other villagers' phones and had the identifying code of the volunteer in them.

The 10th percentile of the number of messages sent by volunteers was 1, while the 90th percentile was 11. Thus, magnitude of activity across community volunteers varied significantly. These numbers are tabulated below:

Table 8: Community Volunteers Activity

	Total Messages	# of Volunteers	Avg # of Msgs	10th Percentile	90th Percentile
Election	132	30	4.4	1	7.5
Non-Election	155	29	5.3	1	11
Overall	287	59	4.9	1	11

Analysis of Responses from Interactive Voice Response (IVR) calls

Chapter 4 discussed the specific content of the IVR calls, the idea behind each of these calls and the options/questions that were part of its interactive design. In Annex 9, we reassess the rationale of IVR calls, discuss the process of executing IVR calls and highlight the time period over which these calls were made. This subsection deals with the specific number of calls that were made, how many of these were successfully answered and which of the successfully answered calls generated valid responses. These statistics assist us in understanding the success rate of IVR calls in the context of the intervention.

Specifically, the statistics in this subsection include calls made during the first round (four calls made to village participants) and the second round (four calls made to participants and two calls made to community volunteers). All components of the analysis in this sub-section are accompanied by tree diagrams which are provided in Annex 9. These illustrate the statistics for a particular IVR call.

Table 9 provides detailed descriptive statistics on IVR calls:

Table 9: Descriptive Statistics for IVR Calls

It can be	# of calls	# of calls answered	% answered	Avg # of calls answered/village	# of valid responses	% of Valid responses for calls answered	Avg # of valid responses/village
Round 1							
Msg 1	4427	1282	29%	13	1249	97%	13
Msg 2	4427	1554	35%	16	1370	88%	14
Msg 3	4427	1448	33%	15	1255	87%	13
Msg 4	4427	1488	34%	16	1124	76%	12
Total Round 1	**17708**	**5772**	**33%**	**60**	**4998**	**87%**	**52**
Round 2							
Msg 1	4427	1762	40%	18	876	50%	9
Msg 2	4427	1560	35%	16	996	64%	10
Msg 3	4427	1870	42%	19	932	50%	10
Msg 4	4427	1606	36%	17	917	57%	10
Total Round 2	**17708**	**6798**	**38%**	**71**	**3721**	**55%**	**39**
OVERALL	**35416**	**12570**	**35%**	**131**	**8719**	**69%**	**91**

difficult to achieve a high response rate for IVR calls, because these calls might not catch respondents at their most convenient time; respondents might not be willing to answer calls from unknown numbers; or respondents might not be able to understand automated instructions in IVR calls. We can check if the first two issues affected the project's IVR system by looking at the percentage of calls that were answered. For round 1, 33% of all calls were answered. For round 2, this number rises to 38%. This indicates that either respondents had a better understanding of who might be calling during the second round leading to greater willingness to respond, or the timing of the calls was more appropriate.

Looking at the fraction of answered calls that generated valid responses provides key insights into the automated message's ability to elicit a valid response from the user. Of the calls that were answered during round 1, 87% elicited valid responses. However, this percentage drops sharply when round 2 is considered. Out of all the calls that were answered in round 2, 55% elicited valid responses. This suggests that calls made during round 2 were less user friendly and relatively inefficient, in comparison to calls made during round 1.

Key Messages Received on CDP

The CDP was used to tag incoming SMS messages according to their content. This capability gave the intervention team an accurate bird's eye view of what the most significant topics of discussion were on the portal. For this purpose, 18 non-junk, high occurring tags were created. These tags (categories) are explicated in Annex 7.

A word cloud has been produced here in order to help visualize the most frequent issues discussed on the CDP by local community members.

Figure 17: Word Cloud of Key Words

The size of each of the words in the word cloud is proportional to the frequency of its appearance in complaints, opinions and suggestions sent by villagers[9]. It is apparent that a large number of participants talked about infrastructure and facilities at schools, including number of classrooms, boundary walls, gates and roofs, amongst others. Further, villagers frequently discussed issues related to teachers, as well as issues pertaining to SMC funds, in terms of the allocation of finances and the fund's management. These findings provide critical feedback to any efforts at scaling up the intervention.

[9] The word cloud merges some of the categories originally used for sorting. "SMC" here includes "SMC", "SMC Fund", "Executive Committee" and "Budget". "SMS Campaign" includes "SMS Campaign" and "Thanks". Finally, the category "Others" pulls together "Parent", "Flood", "Stipend" and "S.I.P.".

Chapter 8: Analysis of Capacity-Building Support

The suite of interventions introduced by the project included village mobilization, providing a 'voice' to local community members and institutional strengthening. Up until now, the analysis has largely focused on the first two of these three interventions. While mobilization and provision of a voice are crucial for improving educational accountability at the local level, villagers can affect further change by utilizing existing institutions. And for this, community members need concrete process knowledge of these institutions to be able to interface with them, and the capacity to harness their potential. Elections and capacity-support (also termed the 'crossover intervention') provided the community with precisely these capabilities. This section builds on the structure of the crossover intervention that was introduced in chapter 5, and goes further to provide information on its key elements: the buy-in of the community and the success of the project team in mobilizing villagers for this intervention, gauged through participation rates in Executive Body (EB) meetings; and School Improvement Plans (SIPs) which are a critical tool used by local participants to instigate change through the institution of the SMC.

Elections

The crossover intervention was rolled out in 57 intervention 1 (SMC) villages and 56 intervention 2 (SMS) villages. Elections were conducted in at least one school in all crossover villages which were part of intervention 1[10]. On the other hand, for crossover villages within the treatment sample for intervention 2, elections were not held in two villages: village Dharoro in district Mirpurkhas and village Khipro in district Sanghar[11].

After the election of executive bodies, the project team provided training and capacity-building to the new members of these apex bodies. The engine of these capacity-building measures comprised three executive body (EB) meetings, during which EB members were trained on drafting SIPs, record-keeping, engaging vendors and maintaining the SMC bank account.

Participation Rates in Executive Body Meetings

A high attendance rate for executive body meetings was critical for successful implementation of the project, as well as for the future sustainability of the SMCs. While community feedback and oversight is essential for the effective functioning of an SMC, the members of the executive body are the people who get their hands in the soil – fulfilling legal requirements such as maintaining documents related to the bank account, record-keeping for the SMC, drafting and finalizing the SIP and procuring goods and services for the school.

[10] Attendance sheets for the three Executive Body meetings were used as an indicator that elections were held in a particular village.

[11] It was necessary for elections to be conducted in the presence of governmental district officials. In these two villages however, district education staff did not show up.

Analysis of attendance sheets data received from crossover intervention villages shows that attendance for executive body meetings was high across districts as well as treatment arms (SMC & SMS). As explained earlier, an executive body has 5 members. Attendance for executive body meetings was never less than 4 in any of the villages for any of the three meetings. In fact, a large fraction of executive body meetings were attended by all five members. The high level of attendance indicates that mobilization efforts made by project staff in the crossover intervention villages were successful.

The mean attendance level across treatment types (SMS and SMC) was approximately 4.8 out of 5. There is almost no variation across the two types of crossover interventions. These results are reproduced in the following table:

Table 10: Mean Attendance Rates for SMC & SMS Crossover Interventions

	1st EB Meeting	2nd EB Meeting	3rd EB Meeting
SMC + Elections	4.76	4.80	4.83
SMS + Elections	4.80	4.79	4.80
Overall	4.78	4.80	4.81

District-wise data reveals slight variations. These findings are interesting, since a mean attendance level that is closer to 4 could trigger weaknesses in the decision-making chain: intra-EB decisions would require a tiebreaker in the form of the fifth member, without whom, deadlock over important decisions is more likely.

We find that for EB meetings in Mirpurkhas and Sanghar, the mean attendance level is approximately 4.9 to 5, respectively. However, for district Mitiari, the mean attendance level was closer to 4. There is relatively greater potential for a lack of a tiebreaking vote to cause problems in this district. However, it must be emphasized that this is only one aspect of the ability of executive bodies to be successful in managing the affairs of the SMC.

Table 11: Mean Attendance Rates for the 3 Treatment Districts

	1st EB Meeting	2nd EB Meeting	3rd EB Meeting
Mirpur Khas	4.7	4.9	4.9
Mitiari	4.4	4.3	4.3
Sanghar	5.0	5.0	5.0

Statistics related to executive body meetings also have a temporal element to them: the first EB meeting was followed by the second, which was followed by the third and final EB meeting.

Any increase or decrease in mean attendance levels from EB1 to EB 2 and EB 3 could indicate an increase or decrease in the level of interest amongst executive body members for EB meetings over time. However, as illustrated in tables 10 and 11, participation rates were sustained across the three EB meetings for both variants of the crossover treatment, as well as for all three districts. This indicates that the quality of training being imparted to executive body meetings was successful in maintaining members' interest.

There are multiple non-monetary benefits associated with a successful SMC. These include parental involvement in school-related activities, greater accountability of governmental officials and heightened awareness amongst the local community about the advantages of an educated youth. However, non-monetary benefits may take time to manifest. On the other hand, finance-related benefits can be realized in the short-term. This is because increased use of SMC resources translates into better facilities, potentially better teachers and an overall improved learning environment for students.

In the following section, we analyze cost estimates prepared by executive bodies across districts and treatment arms. Thus, we train a lens on the level of finances that communities require for the better functioning of their schools through an analysis of approved SIPs, which are also an important indicator for need at the local level.

Average Cost Estimates in SIPs

Executive body members were trained in developing School Improvement Plans (SIPs) for the SMC. First however, they were advised on how they could check the availability of funds in their bank accounts. Once the availability – or lack thereof – of these funds had been ascertained, members could start developing the SIPs, based on the amount of funds available and the needs of the school.

Aggregate cost estimates were recorded for each village. These cost estimates have been extracted from School Improvement Plans prepared by executive bodies and finalized during the third and final executive body meeting held under the auspices of the crossover intervention. Similar to the attendance rates, we average cost estimates across schools at the village level, and across villages at the district level (or at the treatment level).

The government is legally bound to provide PKR 22,000 (approximately USD 214) annually to each SMC. However, the individual executive bodies did not limit their SIP cost estimates to this funding level. The cost estimates in many SIPs were greater than PKR 22,000. This is primarily due to two reasons: 1) many of the SMCs had not undertaken repairs over multiple years, leading to large *needs* for furnishing depreciated assets; and 2) some SMCs had been receiving annual funding which they had not spent, and therefore, had accumulated in their bank accounts. Thus, these SMCs could afford to develop SIP cost estimates greater than the annual funding limit, since the *availability* of cumulative bank funds allowed them to address multiple needs of the schools, neglected for years.

Looking at the distribution of mean cost estimates, it is clear that large differentials exist across districts. The overall mean cost estimates for Mirpurkhas (PKR 40,365 or USD 392) are almost twice as large as mean cost estimates for Sanghar (PKR 23,214 or USD225). We can therefore infer that, by and large, villages in Mirpurkhas either require a larger overhaul of their schools as compared to schools in Sanghar and/or have been underspending their funds more than schools in Sanghar.

Table 12: Distribution of Cost Estimates (Statistics)

	Mean (PKR)	Mean (Current USD)	Standard Deviation	10th percentile	50th percentile (Median)	90th percentile
Mirpurkhas	40,365	392	30,039	21,000	25,525	77,500
Mitiari	34,047	331	17,780	21,025	21,950	62,000
Sanghar	23,214	225	9,749	16,000	21,500	28,600

While there is a gap in mean estimates across districts, these mask larger variations across villages within the same districts. Looking at the 10th and 90th percentiles, we see that the 10th percentile cost estimate for Mirpurkhas is PKR 21,000, compared to the 90th percentile which is PKR 77,500. If we use cost estimates as a proxy for available funds, we can assert that villages at the 90th percentile in Mirpurkhas have funds that have been accumulating for an average of 3.5 years (PKR 77,500, when annual funding is PKR 22,000).

Variations in Mitiari reveal a similar pattern as in Mirpurkhas. However, in Sanghar, we find a narrower range: the 10th percentile cost estimate is PKR 16,000, compared to the 90th percentile cost estimate which is PKR 28,600. The distribution of cost estimates for the three districts is illustrated in Figure 19.

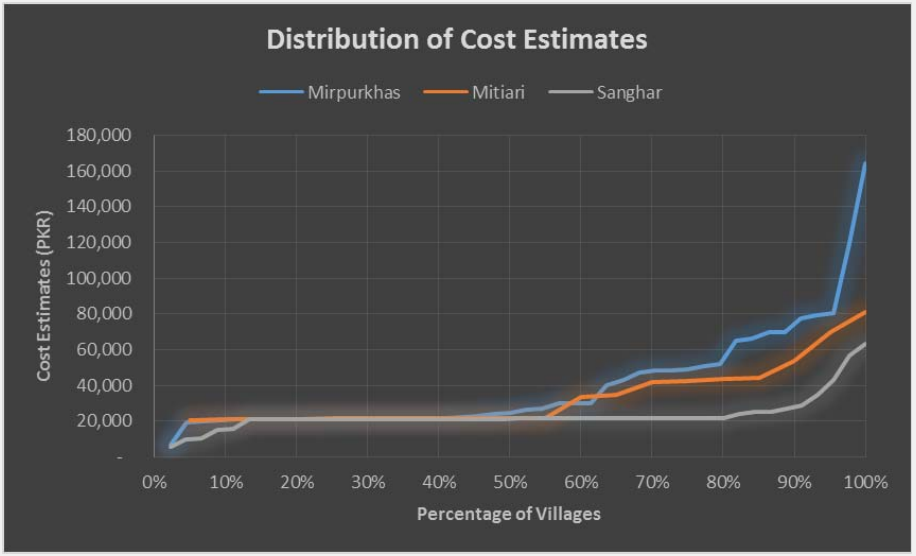


Figure 19: Distribution of Cost Estimates (percentile-wise)

Across treatment arms, there is relative consistency in terms of average cost estimates. Thus, high mean cost estimates in villages for both interventions lead to high overall mean cost estimates in Mirpurkhas. Similarly, lower mean cost estimates across both interventions lead to the relatively lower, overall mean cost estimates in Sanghar. District Mitiari shows higher mean cost estimates as compared to Sanghar, but lower mean cost estimates as compared to Mirpurkhas. These differences are illustrated in figure 20.

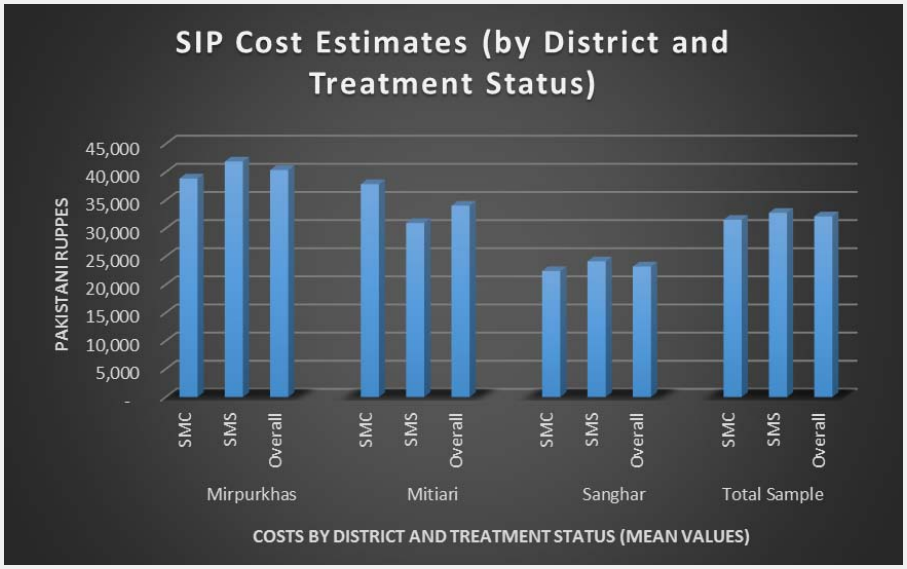


Figure 20: Mean Cost Estimates of School Improvement Plan

While absolute magnitudes of mean cost estimates appear to be consistently higher or lower across treatment arms within a particular district, we can make valuable inferences by looking at differential mean cost estimates *within* districts. The idea is that in SMS villages, due to the ongoing virtual dialogue, EBs could be under greater scrutiny, leading to differences in mean cost estimates across intervention 1 villages (where the virtual dialogue does not exist) and intervention 2 (SMS) villages. For intervention 2 villages where the CDP was being used to launch a sustained campaign to inform the community and arm them with a functioning knowledge of the SMCs, mean cost estimates indicate a potential course correction brought about by feedback received from the community.

In district Mirpurkhas, intervention 2 villages show an average cost estimate per village which is *higher* than intervention 1 villages by 8%. Similar patterns hold for district Sanghar. In district Mitiari however, the mean cost estimate for intervention 2 villages is *lower* than the mean cost estimate for intervention 1 villages by 18%.

The average cost estimates are a concrete measure of the monetary needs of schools across treatment villages. However, what these needs represent can be analyzed by looking at budget heads that are repeated frequently in School Improvement Plans. The next section provides a snapshot of the frequency and types of these budget heads.

Expenditure Analysis of SIPs

The earlier word cloud analysis presented in Chapter 7 highlighted multiple issues related to education, including lack of quality teachers, poor facilities, low finances, support or lack thereof of the education department and the effectiveness of the SMS campaign. As compared to these broader issues, the SIP focuses on the bare bones of running a functioning school: ceilings, boundary walls, gates, fans, bathrooms, blackboards and desks. It is clear therefore, that in contrast to the broader community, the executive body finds itself concentrating on getting schools physically up and running.

Figure 21: Word Cloud of Frequently Stated Budget Items in SIPs

This analysis relies on the frequency of common budget heads appearing in SIPs as a measure of the primary needs of schools at the local level[12]. The size of each word in the word cloud in figure 21 is proportional to the frequency with which it appeared in SIPs. The word cloud reveals that there is a dire need to implement structural repairs in schools. Furniture and fixtures also feature frequently across SIPs. Next in line are water, sanitation and hygiene needs in schools. Clean drinking water, access to bathrooms and good hygiene ensured by regular school cleaning are necessary for attracting students to schools and for providing them with a healthy environment to study in. Many of the schools function without electricity, which is why electricity installation and repairs are also frequently cited budget heads in SIPs. Lastly, schools appear to be in urgent need of stationary for students.[13]

It is obvious that the first step that SMC executive bodies by and large wish to take is to improve the physical outlook of the school, so that schools become more attractive for students to attend. Further, a community driven to improve the state of education at the local level will be further incentivized to take care of facilities that it has helped to repair and renovate, and which are both functionally as well as aesthetically appropriate for its children to use.

[12] Cost estimates for budget heads are not used to construct the word cloud. This is because certain cost items, especially those related to construction are expensive and would therefore, shift the distribution of funds in their favor, and skew their perceived importance. Frequency of cost items is a better indicator to identify common issues faced by schools across the three target districts.

[13] Structure here encapsulates cost items such as ceiling and floor repairs and construction, as well as maintenance of the floor. Furniture refers to chairs and tables that are used by both students and teachers. Fixtures include doors, cabinets, blackboards, fans and windows.

The word cloud is also a reflection of the dire physical state of schools at the local level. It must be kept in mind that executive body members have low capacity in requesting quotations, filling purchase orders, record-keeping and maintaining budgets. Given that *procurement* appears to be a major next step in implementing such SIPs, capacity constraints in terms of knowing how to navigate the process of procuring goods and services should be kept in mind in designing future interventions that attempt to improve the ability of executive body members to undertake their responsibilities.

Conclusion

The community engagement mechanisms tested in this field experiment are an attempt to advance our knowledge and understanding of challenges faced in design, implementation and take-up to inform operationalization of similar mechanisms in the Bank's projects. The nature of the technical design defines the parameters of participation, responsiveness and collaboration resulting from these mechanisms. For instance, the key design parameters in retrospect, for the success of village-level meetings were: i) reaching out to the community through channels that they trust and are familiar with (village elders, youth, and mosques); ii) local community volunteers who they can identify with and who are sensitive to the sociocultural context; and iii) constant monitoring and support provided to the firm to keep them on their toes in the field. Likewise, the salient design features of CDP intervention were: i) a viable technology architecture for two-way communication to take place in rural Sindh; ii) customization of the infrastructure to local language and mobile devices used in these villages; and iii) a combination of nudges in the form of air-time credit and community volunteers to support the take-up of this initiative. Lastly, the key design elements of capacity support intervention were: i) to transfer authority though the district officials to newly elected members in village meetings; ii) participatory training where the members were expected to draft a School Improvement Plan by the end of the third meeting; and iii) availability of financial resources to implement those plans.

This field experiment illustrates the level of complexity for a small-scale project targeting only 230 communities in rural Sindh. We recommend similar field experiments before scaling-up such mechanisms for sustained citizen-engagement. Lessons learnt from the design and implementation of interventions, while controlling for supervision and capacity to implement, could be very useful in developing a refined design to be implemented by the government. First order issues of what works in effectively engaging community will be addressed at the pilot stage. The operational dialogue and efforts of the Government can then focus exclusively on implementation of the design that has already been established to work under the right conditions. Otherwise, we might commit an error in concluding that mechanisms to support community engagement are not effective when the quality of supervision and capacity were both lacking on the government side.

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Annexure

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3. Content of Informational Messages and IVR Calls
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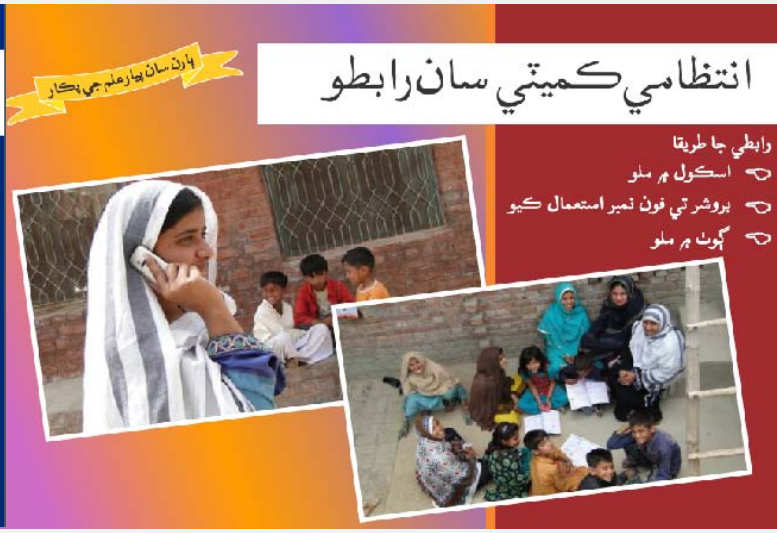
Annex 1: Snapshots of Selected Project Tools

Project instruments such as handouts, flyers and scripts played a critical role in the successful implementation of the project. Handouts and flyers were used to spread the word about village meetings, the process of conducting which, was provided in easily understandable scripts for the various kinds of meetings. This annex provides snapshots of these project tools.




HANDOUT FOR EXECUTIVE BODY MEETING - 1

HANDOUT FOR EXECUTIVE BODY MEETING 1

انتظامیہ کمیٹی کی میٹنگ 1 کا مسودہ

WEITEK GROUP, KARAHCI
www.weitek.net
PAGE 1


SCRIPT FOR EXECUTIVE BODY MEETING - 1

SCRIPT FOR EXECUTIVE BODY MEETING 1

انتظامیہ کمیٹی کی میٹنگ 1 کا مسودہ

WEITEK GROUP, KARACHI
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PAGE 1


SCRIPT FOR SMC GENERAL BODY MEETING - T1

SMC GENERAL BODY MEETING SCRIPT - TREATMENT 1

SMC جنرل باڈی میٹنگ کا مسودہ۔ ٹریٹمنٹ 1

WEITEK GROUP, KARACHI
www.weitek.net
PAGE 1

Annex 2: Technical Design of the CDP

While chapters 3 and 4 provide an overview of how the CDP was designed, piloted and implemented, the sheer significance of the portal as well as its innovative design necessitates a detailed discussion of the specific design features of the portal. This annex lays down the fundamental conceptual pillars on which the CDP was established and explicates the structure that was built around this structure. This annex is especially relevant for readers who wish to understand the nuts and bolts of the portal.

The CDP was programmed using ASP.Net on the Windows 8.0 platform. ASP.Net is a faster and easier alternative to other Web application frameworks such as Perl or C. Further, it can accommodate a host of languages including VBScript or Jscript. It also allows for separation between the database and the web design aspects of the platform. All these benefits of ASP.Net allowed for ease of maintenance. This is important given that programmers of the portal are not necessarily the same people who maintain it. Anyone with a working knowledge of the platform could therefore, make course corrections to avoid potential problems which could emerge during project rollout. Essentially, this protected the portal from unpredictable HR changes on the project team.

An external Modulator/Demodulator (MODEM) was used for sending and receiving messages. The modem was connected to the server and this allowed for the directing of messages to specific sections of the CDP's database. Before any activity was initiated, the administrator of the CDP checked the connectivity status of the MODEM by sending a test message and waiting for its response, and by checking the MODEM test report for its connectivity status. In case the MODEM was not responding, the administrator had to contact the M3TECH support team to restart the MODEM.

The Portal has its own dedicated URL with server space reserved for storing large amounts of data. It can be accessed at http://www.aknservices.com/worldbanksms/. However, a username and password is required at the time of login. This protects the database from unauthorized users and secures the confidentiality of the participants. A snapshot of the main page of the portal is provided in Figure 22[14]. With a minimalist design, the focus is largely on functionality and ease-of-use rather than aesthetics.

The CDP was supported by three fundamental pillars: 1) smooth flow of information from the users to the platform; 2) ease of data management for backend data managers and 3) versatile access to existing information for data analysis. This subsection discusses these pillars in more detail. It also provides a background on the decisions that implementers had to make to balance feasibility with these core principles.

Streamlined Participant-Portal Information Flow

The first decision that M3Tech – the lead technology partner on the project – and the World Bank team had to make was with regards to the channel to be used to connect with village participants. Cost of sending messages for participants was dependent on the traffic generated on the portal. Given that the volume of messages generated on the portal was relatively unpredictable, it was difficult to do a cost-benefit analysis of the method of

[14] All snapshots are provided in the "notes" section at the end of this chapter.

sending messages to project participants. The two primary methods for sending these SMS were the long code and the short code.

Short codes are reliable, faster and enable users such as the project team to track receipt of messages. Short code charges are independent of the level of traffic generated. Therefore, they are ideal for massive informational and marketing campaigns which generate hundreds of thousands of SMS messages. However, they are also much more expensive with a fixed price level. If short code was to be used, each message received from village participants would have cost the participants PKR 1/-, unless an overall traffic threshold was achieved. Bear in mind that this was a discounted rate for non-profit organizations – for corporate campaigns, such messages cost twice as much. Through the Bank's project partner M3Tech, discussions were held with two of the biggest telecom companies of Pakistan – Mobilink and Telenor – for revising these rates further. The two telecom companies suggested that if the project could guarantee a fixed cost per month (approximately PKR 100,000 or USD 980) as payment on behalf of the participants, then short code could be used by village participants at no cost to them.

Long codes are less reliable and as compared to the short code, do not provide the ability to administrators to confirm receipt of messages sent. However, they do not have a fixed price level and are in fact, relatively inexpensive – both for sending and receiving messages. Long codes are not regulated like short codes, reducing the ability of users to control spam. However, because they are not regulated, administrators have greater flexibility in sending out messages when they need to be sent. No wait time is required between sending messages, the messages being vetted by the telecom company and then received by project participants. This is what happens when short codes are used. Long codes also have a dedicated number which can send and receive messages, and therefore, could be easily saved and recalled by project participants

Analyzing these pros and cons, the project team decided to use long codes so that a) the cost of the project to both the project team and the participants was minimal, and b) the flow of information was uninhibited. The long code that was used for the project was +92 315 3002182.

The project team at M3Tech was responsible for consistent debugging of the portal in case of any issues. Debugging was especially necessary at the beginning of the project when unexpected issues were likeliest to arise. The team carefully assessed whether SMS being sent by village participants were actually being received on the portal, and whether SMS being sent by the project team were being received by village participants. As mentioned earlier, long codes do not allow for receipt of messages to be verified. However, during the initial field visits when village members participated in the demonstration poll and polling results were blasted back to them by the project team, the team on the ground informed the M3Tech team if these summary messages had been received by the community members or not. This sustained evaluation process on the part of M3Tech was necessary to ensure that there were no stoppages in the flow of information between participants and the portal.

Versatile Data Management

The initial village meeting was a significant factor in the generation of new traffic. However, to maintain participant interest in the portal, other catalysts had to be used. These included individual messages sent to participants in two rounds over the course of the project, and periodic summary SMS messages which were sent to participants on a weekly basis. Further, maintenance of village-level information, such as data related to village meetings, polling, tagging of messages and contact details of participants was time sensitive and therefore, required a robust system of data management.

Data in the form of messages was automatically stored in the database when these messages were received on the long code. The larger database consisted of multiple filters such as date, contact number of the message sender, village code and type of SMS content. With the help of these filters, extracting specific parts of the database became easier. Otherwise, this would have been a Herculean task, requiring managers to sift through large amounts of unwanted data to get what they needed.

Attendance data in the form of contact information of participants could be conveniently uploaded on the portal. This was done by accessing the "Meeting" tab and clicking on "Upload Meeting Contacts". The relevant tabs for this process are highlighted in Figure 23 in the notes below.

For ease of use, attendance details received from meetings did not have to be entered one participant at a time. Instead, a pre-designed Excel worksheet could be filled and uploaded to the portal which was automatically appended to the existing database maintained by the portal. Wherever bulk information had to be uploaded, a pre-designed Excel sample was provided so that data managers were always aware of the correct format of the worksheet that was to be uploaded. This precluded errors and made uploading information more convenient. Figure 24 provides a snapshot of one of these sample worksheets, specifically the one used to upload attendance information in bulk.

The portal could also be used to update contact information after the initial meeting. Once the meeting was completed, the portal could send SMS messages to local participants. These could be in the form of single SMS sent to individual numbers, or bulk SMS sent to a large number of participants in specific villages. The bulk SMS was the primary tool that was used to send summary SMS as well as informational SMS to participants. Using two columns in a simple Excel sheet, portal users could construct a list of messages corresponding to contact numbers to which these messages had to be sent. Once this was done, the file was uploaded on the portal. From there on, the portal had the ability to automatically go down the list and blast each SMS out to the corresponding participants.

Cataloguing received messages was as important, if not more, as managing the process of sending messages. This was especially true since a large number of messages received from participants were junk messages. Junk messages were defined as incomplete or irrelevant messages. Junk messages would have clogged up the CDP if they were not filtered.

For non-junk messages, it was important to sort these into different buckets which contained messages related to different aspects of school-management and educational governance at the local level. This allowed for a large, nebulous dataset to be turned into

smaller fractions of information concentrated in different topical areas. Sorting of messages into these different buckets was accomplished through tagging of messages based on what area of education/schooling was being discussed in the message. One of the weaknesses of the portal design was that tagging had to be undertaken manually. The primary reason for this drawback was that the design could not undertake tagging in multiple languages: English, Urdu, Roman Urdu and Sindhi. These were the languages that participants could use for SMS messages. Therefore, tagging required significant manpower and was bound to induce some errors. However, the magnitude of these errors was assumed to be low, since a single message could be tagged with multiple labels and therefore, each non-junk message was expected to fall into at least one relevant category. Further details about the categorization of messages are provided in Annex 7.

Ease of Access to Data for Analysis

The portal was designed to accommodate simple data extraction and recall. The interface provides highly intuitive categorization of data, making it easy for analysts to query and retrieve information from the larger database. This was a critical design feature, since analysts were not assumed to be the same as data managers. It was essential that the portal be designed in such a way that data retrieval could be undertaken without an exhaustive understanding of the data entry and management process.

Figure 22 provides a snapshot of the main page of the portal. There was a strong emphasis on making the portal visually effective. The tabs placed at the top of the portal allow for easy navigation through the data. The "Intervention" tab gives options for filtering and retrieving information that was collected during the intervention. This tab is primarily used to access SMS messages that were received from project participants. Messages received could be ordered based on village type, individual contact number, community volunteer code and tagging. Similarly, the "Meeting" tab – as the name suggests – provides access to information collected during the first village meeting.

While these two tabs provide data received from participants either during the initial meeting or over the course of the intervention, the "Sent SMS" tab provides detailed information on messages sent from the portal to participants by the project team. Once again, the key feature of the portal is its ability to filter information based on filters. Logs of sent messages could be viewed either by SMS type (single or bulk) or by contact numbers that the messages were sent to. Thus, data analysts could hone in on different parts of the sent SMS data.

A key feature of the reports that could be generated by the portal was that they could be filtered by date, mobile number, SEMIS code, GPS coordinates, district, tehsil, village, settlement ID, contact person name and type of contact person (village representative or participant). Therefore, analysis of activity on the CDP can be disaggregated using such filters. This disaggregation allows analysts to examine heterogeneity in activity on the portal. For example, the project team might seek to analyze activity during specific time periods for a particular district, and for a specific group of stakeholders, such as village participants. This saves a significant amount of time. One of the most important outcomes of real-time analyses was that the project team could retain situational awareness of the project, and

understand which areas had a higher fraction of active, as compared to passive users. Active users were defined as participants who sent non-junk messages to the portal while passive users were ones who did not directly engage with the portal, but who informed the opinion of active users who directly interacted with the portal.

Notes

The following snapshots illustrate different aspects of the Community Development Portal:

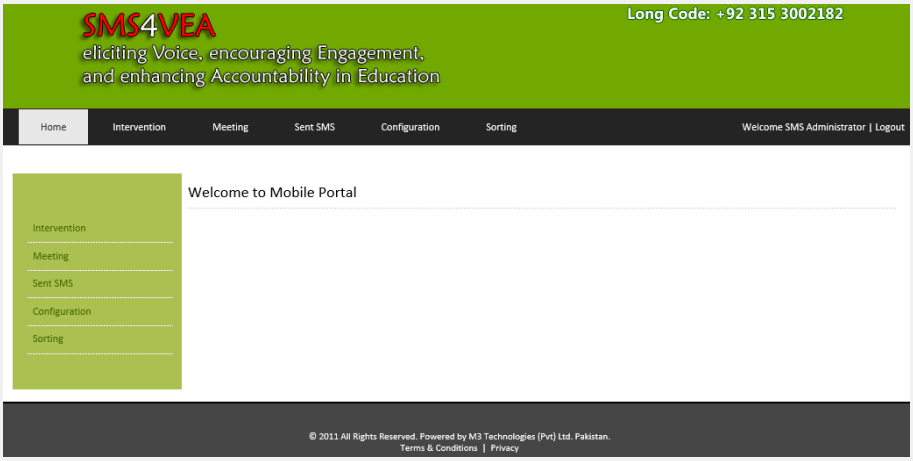


Figure 22: Main Page of CDP

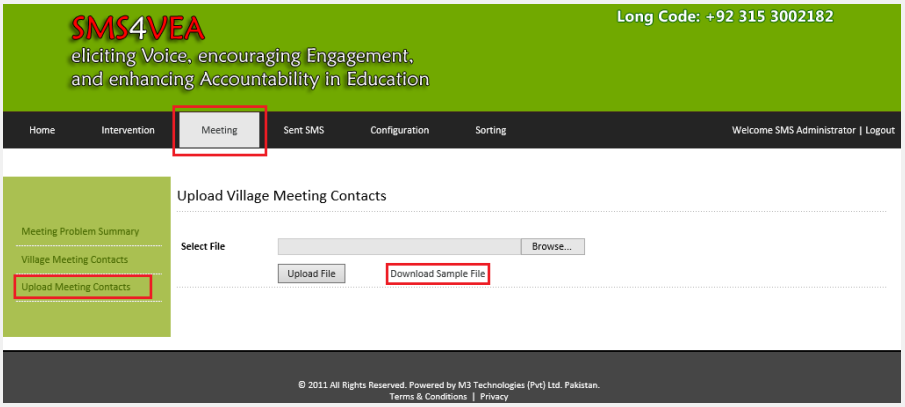


Figure 23: Uploading Attendance Contacts on CDP

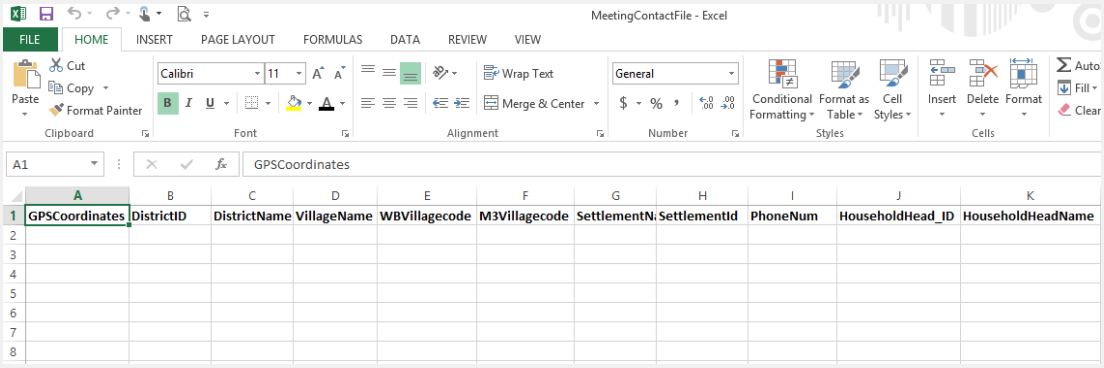


Figure 24: Example of Sample Worksheets on CDP

Annex 3: Content of Informational Messages and IVR Calls

External nudges that aimed to catalyze activity on the CDP and to prevent drift in community-level discussions were meticulously crafted to be highly effective in the context of rural Sindh. Annex 3 deals with two such nudges – Informational SMS messages and IVR calls – and sheds light on their content. The first two sub-annexes provide English translations of informational messages that were sent in Urdu across two rounds. The last two sub-annexes provide information on IVR calls, including their purpose and the translation of their content.

Annex 3a: Informational SMS Messages – Round 1 (Translated)

The table below provides details on specific informational SMS messages sent to community members during round 1, categorized by themes and sorted chronologically.

Table 13: Translation of Informational Messages - Round 1

Day	Thematic Area	Informational SMS Message
1	Welcome message	The Government of Sindh welcomes you to the SMS project. Teachers, SMC members and parents will be connected via this project; in which all of us, together, will be able to provide your child with better education.
2	Information on Process	You will be provided free of cost information regarding the school through the SMS project. You can SMS your opinion about the given information on 0315-3002182. A summary of all messages received from the village shall be sent back to you.
3	SMC funds	Every year the SMC of a primary school receives PKR 22,000 which goes into the SMC's account. This account can be operated with the signatures of the headmaster or the chairperson.
3		An SMC's budget can be spent on 3 things: 1. facilities and maintenance of the school; 2. wages for cleaning of school; and 3. transportation of students to and from school
4	School inputs	Every year, the Government of Sindh provides all books free of cost to each student in primary schools. These do not include notebooks.
5	Structure	Each SMC has two components. General Body and Executive Body. The General Body includes teachers and parents of all the schoolchildren enrolled in the respective school.
		The Executive Body consists of five members. The headmaster, who is the general secretary. Two representatives from amongst the parents, one of whom is the chairperson. And two respected members of the village.
		The responsibility of managing the SMC's administrative processes lies with the head teacher and chairperson. Since the chairperson is from amongst you, you have a huge role to play in the workings of the SMC
6	Elections	Elections for the Executive Body in a proper manner are necessary for the success of the SMC. Members are elected after every two years. Elections are held in the meeting of the general body. The headmaster is responsible for conducting these elections.
7		A general announcement regarding the elections should be made at least ten days before the elections. Four members of the Executive Body, excluding the

		headmaster, are elected. People who want to become members of the Executive Body come forward on Election Day. Elections for these seats are held one by one.
8		The Government of Sindh would like to inform you that there are two ways to vote in SMC elections. By ballot or by a raise of hands. All members of the General Body will vote for their preferred candidate. The candidate with the most votes for a seat will be elected for that seat. No member can be a close relative of another member. Keep in mind that in a Girls School, at least three of the members should be female.
10	Action planning	The Government of Sindh would like to inform you that the biggest responsibility of the SMC is the smooth running and betterment of the school.
		If there is a dearth of anything at the school, then it should be addressed through the following ways: take part in SMC meetings; visit schools; and stay in regular contact with the members of the Executive Body.
11	General body meeting	The General Body must meet at least twice a year. A general announcement for these meetings should be made at least three days prior to the meeting. The day and timing of the meeting shall be posted outside the school as well as communicated to children. At least one-third of the parents must be present at the meeting. It is the responsibility of the headmaster to maintain minutes of the meeting.
		Each parent, especially mothers, should actively participate in the General Body meetings. How the money allocated to the SMC is to be utilized should be decided in the meeting. Voice your opinion on the Executive Body's plans regarding the betterment of the school and approve them. If a certain expenditure is causing differing opinions, then the one agreed upon by the majority shall be accepted.
12		Teachers' attendance, teaching techniques and students' academic performances should be discussed in the General Body meeting and decisions about them executed. If there is a complaint about a teacher or a student is lacking in their studies, discuss the issue at the meeting or at school with the teacher. If this is not enough, then talk to the head teacher or officer superior to the head teacher.
		The Executive Body makes a list of the village's children who are not enrolled in school. Discuss ways in which all such children can be enrolled into school. It is essential for such decisions that you give your opinion and a unanimous decision is reached. If a certain decision is causing differing opinions, then the one agreed upon by the majority shall be accepted.
13	School Visit	The Government of Sindh would like to inform you that you should visit schools and check the following: Do the teachers arrive at school punctually and teach properly? Do the students know how to read and write according to their grade level? Are the school facilities usable or not? Are approved plans for improving the school being implemented properly? If you feel anything is lacking, then discuss it in the General Body meeting or contact the Executive Body.
	Contact with executive body	The betterment of the school will happen through the Executive Body because it comprises members from amongst you. You should talk to these members without hesitation and give them your opinions and improve the school together. Check if the Executive Body meets on a monthly basis and carries out its work properly.
14		You have been provided names and mobile numbers of all committee members. If you cannot meet them, then talk to them on the phone. Stay in regular contact with these members.

Annex 3b: Informational SMS Messages – Round 2 (Translated)

The informational SMS messages sent out in this round are categorized and presented in the table below:

Table 14: Translation of Informational Messages - Round 2

Thematic Area	Informational SMS Message
SMS Portal – School Improvement	• The SMS project is a method for improving the school. Love of children, a call to knowledge. • Make the Executive Body, head teacher and teachers hear your views. • These steps can lead to an improvement in the school 1. Exchange views via the SMS project 2. Get involved in discussions with the Executive Body and teachers. 3. Take part in the planning of improvements in SIP or school 4. Make sure that the expenditure of SMC's budget is according to approved SIP • A summary of the villagers' opinion is sent on a weekly basis to the villagers. The summary does not include anyone's name and your anonymity is guaranteed. • You should send your opinions and recommendations via SMS message to the villagers.
SMC Information	• Each primary school has its own SMC i.e. School Management Committee. • Primary school's SMC receives annual funding of PKR 22,000. • SMC's Executive Body has 5 members. 4 Members are selected via elections. The Executive Body has a monthly meeting. • SMC's general body consists of all the parents. General body meetings are held at least twice a year. • SIP i.e. School Improvement Plan consists of the details of the expenses incurred by the SMC. • Villagers should include all such expenses in the SIP, which they consider important for the school via discussions through the SMS project. • SMC's elections and approval of SIP are decided by a vote amongst the general body • Name and phone numbers of members of the Executive Body are provided in the brochure given to you during the meeting. If you cannot find the names, then ask the head teacher.
SMS Portal - Functioning	• Express your desire to participate in the SMS project by messaging on 0315-3002182. • To send messages via the portal, you received mobile credit worth PKR 30 after the meeting. Use this credit and express your opinion via SMS message. You will receive credit in the upcoming months as well. • If you do not know how to read or write SMS messages, then meet with your village representatives [representatives' names]. These are their contact numbers: [representative's contact information]. If these representatives do not help you, let us know.

Annex 3c: IVR Calls – Round 1 (Translated)

The table below provides information on the purpose, content and options provided in these IVR calls:

Table 15: Translation of IVR Calls - Round 1

Call #	Purpose	Content	Options
Audience: Community Participants			
1	This was an introductory message, checking on the status of households' attendance at the village meeting.	The Government of Sindh welcomes you to the SMS project. A few days ago, a meeting was held in your village for the initiation of the SMS project. Did anyone from your household attend the meeting?	1. For "Yes", press 1. 2. For "No", press 2 3. For "I don't know", press 3
2	The purpose of this voice message was to acquire participants' preferences for the language used in the SMS messages sent to their mobile phones. Participants received SMS messages in the preferred languages after this IVR call.	Through the SMS project, important information about the school will be sent to you in the form of an SMS message. These SMS messages can be sent in Urdu or Sindhi, depending on your preference. Which language do you want to read the SMS message in?	1. For "Sindhi", press 1 2. For "Urdu, press 2
3	The third IVR follow-up call aimed to gather information on the participation of registered villagers in the project, and to understand the reasons for them staying away from project activities.	The SMS project has been initiated to bring improvements to the school. Your participation in this project is very important. Have you sent any SMS message(s) to the project?	1. For "Yes", press 1 2. For "No", press 2
		If "No", then why did you not participate in the project?	1. For "lack of credit balance", press 1 2. For "I don't know how to text", press 2 3. For "I don't want to participate in the project", press 3
		If "I don't know how to text", did the village representatives help you in sending an SMS message?	1. For "Yes", press 1 2. For "No", press 2
4	The last IVR call of the first round sought to gather information on whether intra-community engagement was being generated by the CDP project and specifically,	Informational messages about the SMC have been sent to you over the last few weeks. Based on these SMS messages, did you have a conversation with anyone?	1. For "Yes", press 1 2. For "No", press 2
		If "yes", who did you have this	1. For "members of the executive

	between which stakeholders.	conversation with?	committee", press 1 2. For "teacher or head teacher", press 2 3. For "other parents, friends and relatives", press 3

Annex 3d: IVR Calls – Round 2 (Translated)

The table below provides information on the purpose, content and options provided in these IVR-based calls:

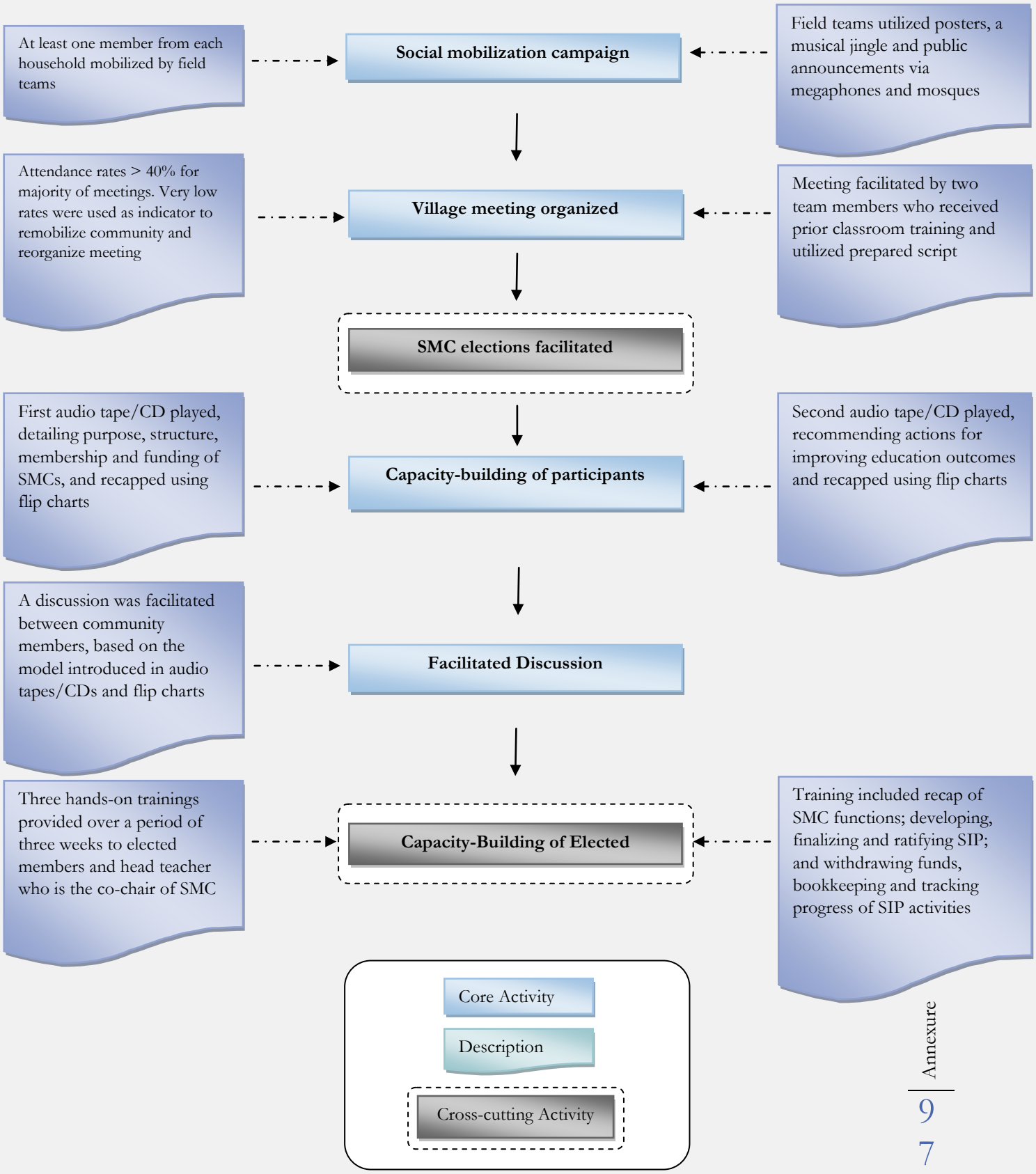
Table 16: Translation of IVR Calls - Round 2

Call #	Purpose	Content	Options
Audience: Community Participants			
1	The first IVR call of the second round asked participants about changes brought about by the CDP intervention.	Hello. This call is being made by the Government of Sindh. What is the biggest change that has been brought about in your village because of the SMS project?	1. For "improvements in the school's facilities", press 1 2. For "lower teacher absenteeism", press 2 3. For "more interaction amongst community members", press 3 4. For "no improvement", press 4
2	The purpose of this call was to understand the reasons for potential non-participation of registered participants in the CDP intervention.	Hello. This call is being made by the Government of Sindh. What is the biggest problem for you terms of participating in the SMS project?	1. For "lack of credit balance", press 1 2. For "I don't know how to read and write SMS messages", press 2 3. For "I don't understand the summary messages", press 3 4. For "I haven't faced a problem", press 4
3	This important call was made to understand the effectiveness of summary SMS messages being blasted to the local community.	Hello. This call is being made by the Government of Sindh. In your opinion, how helpful are the summary SMS messages that are sent by the SMS project?	1. For "very useful", press 1 2. For "useful to a certain extent", press 2 3. For "not useful at all", press 3
4	The last call, similar to the first one, asked participants about changes brought about by the CDP	Hello. This call is being made by the Government of Sindh. What is the biggest change that has been brought about in your village because of the	1. For "improvements in the school's facilities", press 1 2. For "lower teacher

	intervention.	SMS project?	absenteeism", press 2 3. For "more interaction amongst community members", press 3 4. For "no improvement", press 4
Audience: Village Representatives			
1	The first IVR call made to village representatives provided procedural information to the representatives on how to undertake their responsibilities under the CDP intervention.	Respected representative, this call is being made by the Government of Sindh. It is your responsibility to strengthen the SMS project. Help villagers in composing and sending SMS messages about the school, and win free credit balance as a prize. Keep in mind that: 1. The SMS message should only be sent from villagers' mobile phone numbers 2. The SMS message should include your code	
2	The second IVR call made to village representatives provided them with information on the incentive structure that they faced, in terms of free credit balance.	Respected representative, this call is being made by the Government of Sindh. From May 1st, it will be even easier to win free credit balance as a prize. After May 1st, you will receive free credit balance based on the following: 1. PKR 50 for getting 10-20 SMS messages sent 2. PKR 100 for getting 20-50 SMS messages sent 3. PKR 200 for getting 50 or more SMS messages sent	

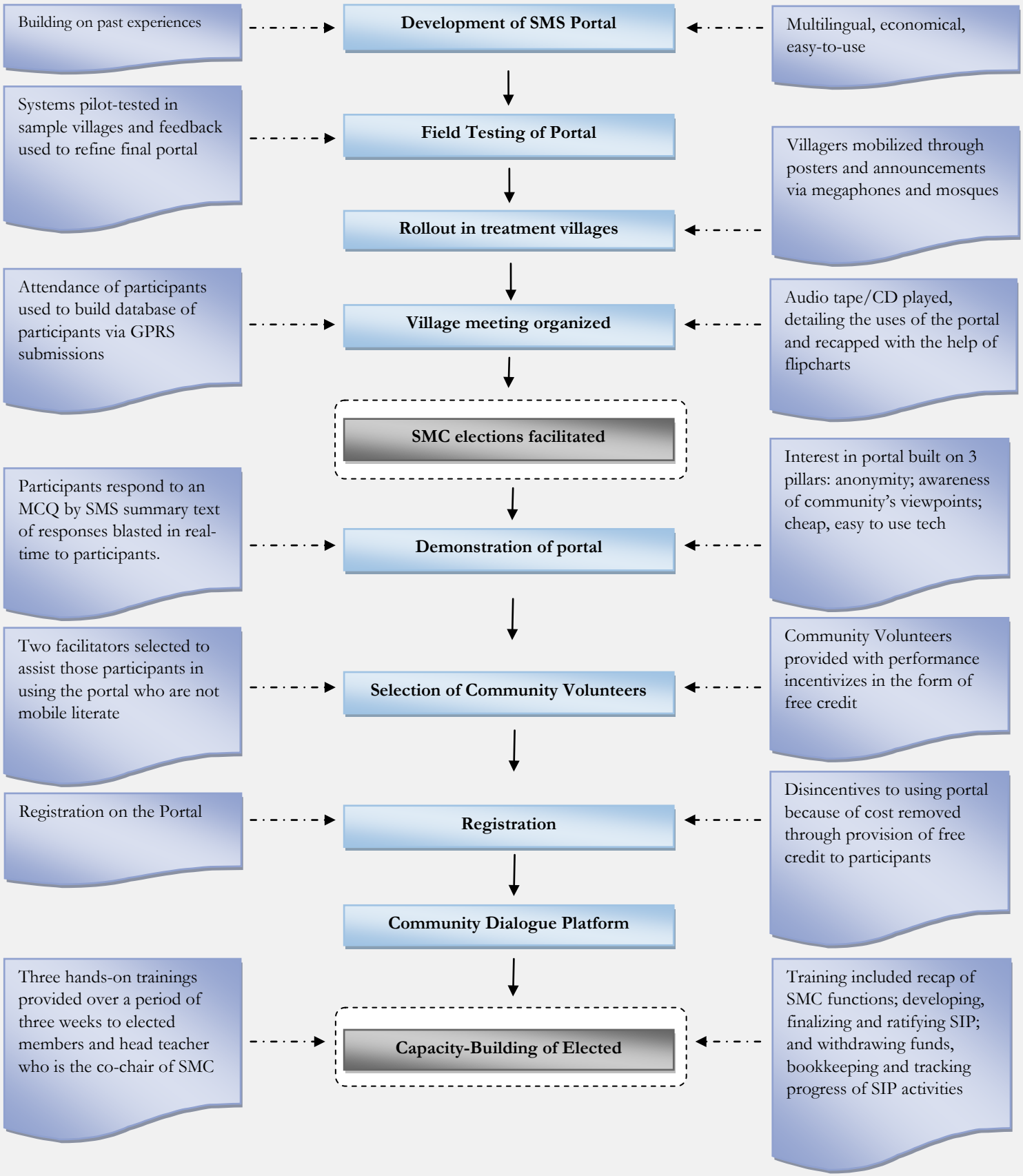
Annex 4a: Workflow Diagram – Intervention 1

This annex focuses specifically on the SMC intervention and illustrates each step taken in its rollout with key details.



Annex 4b: Workflow Diagram – Intervention 2 (CDP)

This annex focuses specifically on the CDP and illustrates each step taken in its design, testing and rollout with key details.



Annex 5: Timeline of the Intervention

Design of the intervention began in April of 2011, with significant amounts of time taken to develop and fine tune the design of the project and to bring together multiple stakeholders such as partner organizations. While training of facilitators and pilot activities went through multiple iterations, the final round of piloting, field testing and trainings occurred in January 2013. The project was rolled out in February 2013 and continued till the end of June 2013. The following Gantt chart provides an overview of these key project activities.

Table 17: Timeline of Intervention

	2011-12	**2013**							
	April - Dec	**Jan**	**Feb**	**Mar**	**Apr**	**May**	**Jun**	**Jul**	**Aug**
Activities									
Coding of Community Development Portal (CDP)									
Pilot testing of CDP portal									
Development of Community Engagement Material									
Training of field facilitators									
Social Mobilization									
Village Meeting									
Demonstration of CDP									
Revisits to Villages									
Informational SMS messages round 1									
IVR calls round 1									
Summary SMS messages									
Informational SMS messages round 2									
IVR calls round 2									
Wrap up and analytics generation from CDP									

Annex 6: Material from Executive Body Meetings

The project aimed to strengthen the institution of the SMC by providing its leaders, in the form of executive body members, with capacity-building support. This support was concentrated specifically on process knowledge of managing the executive body, a lack of which was seen as the missing link in the smooth functioning of the SMC, post-community mobilization. This annex provides snapshots of the materials that were used for this capacity-building support during the three executive body meetings and procedural instruments that executive body members were expected to use on a routine basis when managing the affairs of the SMC.

SCRIPT FOR EXECUTIVE BODY MEETING - 3

Meeting Script - EB 3

اس سکرپٹ میں جو مواد بریکٹ میں [.....] لکھا ہے۔ وہ میٹنگ منعقد کرنے والی ٹیم کے لئے ہدایات ہیں۔ جو مواد بریکٹ [.....] میں نہیں لکھا وہ مددگار 1 میٹنگ کے دوران بولے گا۔

مددگار 1 میٹنگ منعقد کرے گا اور ہونے والی تمام گفتگو کو کنٹرول کرے گا ۔

میٹنگ کے لئے مندرجہ ذیل ہدایات پر عمل کیا جائے:

1۔	تعارف	مددگار 1 بولے گا۔
2۔	میٹنگ ایجنڈا	مددگار 1 بولے گا۔
3۔	SIP ڈرافٹ کو فائنل کرنا	مددگار 1 بولے گا۔
4۔	SIP کی منظوری	مددگار 1 بولے گا۔
5۔	ایکشن پوائنٹس کا اعادہ	مددگار 1 بولے گا۔
6۔	فنڈز	مددگار 1 بولے گا۔
7۔	ریکارڈ کیپنگ	مددگار 1 بولے گا۔
8۔	گفتگو	مددگار 1 بولے گا۔
9۔	اختتام	مددگار 1 بولے گا۔

1۔ تعارف

[مددگار 1 یہاں سے شروع کرے گا۔ فقرات کو آہستہ آہستہ لیکن اونچی اور صاف آواز میں بولا جائے تا کہ ہر شخص واضح طور پر سن سکے۔ اس سے قبل اس امر کو یقینی بنایا جائے کہ مکمل خاموشی ہو]۔

خواتین وحضرات! آج میں آپ کو اس تعلیمی سال کی تیسری انتظامیہ کمیٹی کی میٹنگ پر خوش آمدید کہتا ہوں۔ ہم آپ کے شکر گزار ہیں کہ آپ اپنا قیمتی وقت نکال پائے اور ہم امید رکھتے ہیں کہ ان میٹنگز سے آپ کے سکول میں بہتری آئے گی۔

میرا نام _____ ہے اور میں Weitek کراچی سے آیا ہوں۔

ہم آپ سے گزارش کریں گے کہ آپ پہلے غور سے ہماری بات سنیں۔ میٹنگ کے آخر میں اپنی رائے کا اظہار کریں۔ اگر کوئی بھی بات آپ کی سمجھ میں نہ آئے تو پوچھنے میں کوئی جھجک محسوس نہ کریں۔ ہمارا ساتھ دینے کے لئے آپ کا بہت بہت شکریہ۔

جیسا کہ آپ کو معلوم ہے انتظامیہ کمیٹی کی ذمہ داری آپ کو دی گئی ہے۔ یہ آپ کے لئے بہت فخر کی بات ہے کہ گاؤں کے لوگوں کی نظر میں آپ اس سکول کی بہتری میں ایک اہم کردار ادا کریں گے۔ اور جیسا کہ آپ نے پچھلی میٹنگ میں دیکھا' سکول میں بہتری لانا آپ کی سب سے بڑی ذمہ داری ہے' اور انتظامیہ کمیٹی کے ممبر ہوتے ہوئے آپ کا فرض بنتا ہے کہ آپ وہ سارے قدم اُٹھائیں جس سے اس سکول کی بہتری ہو۔

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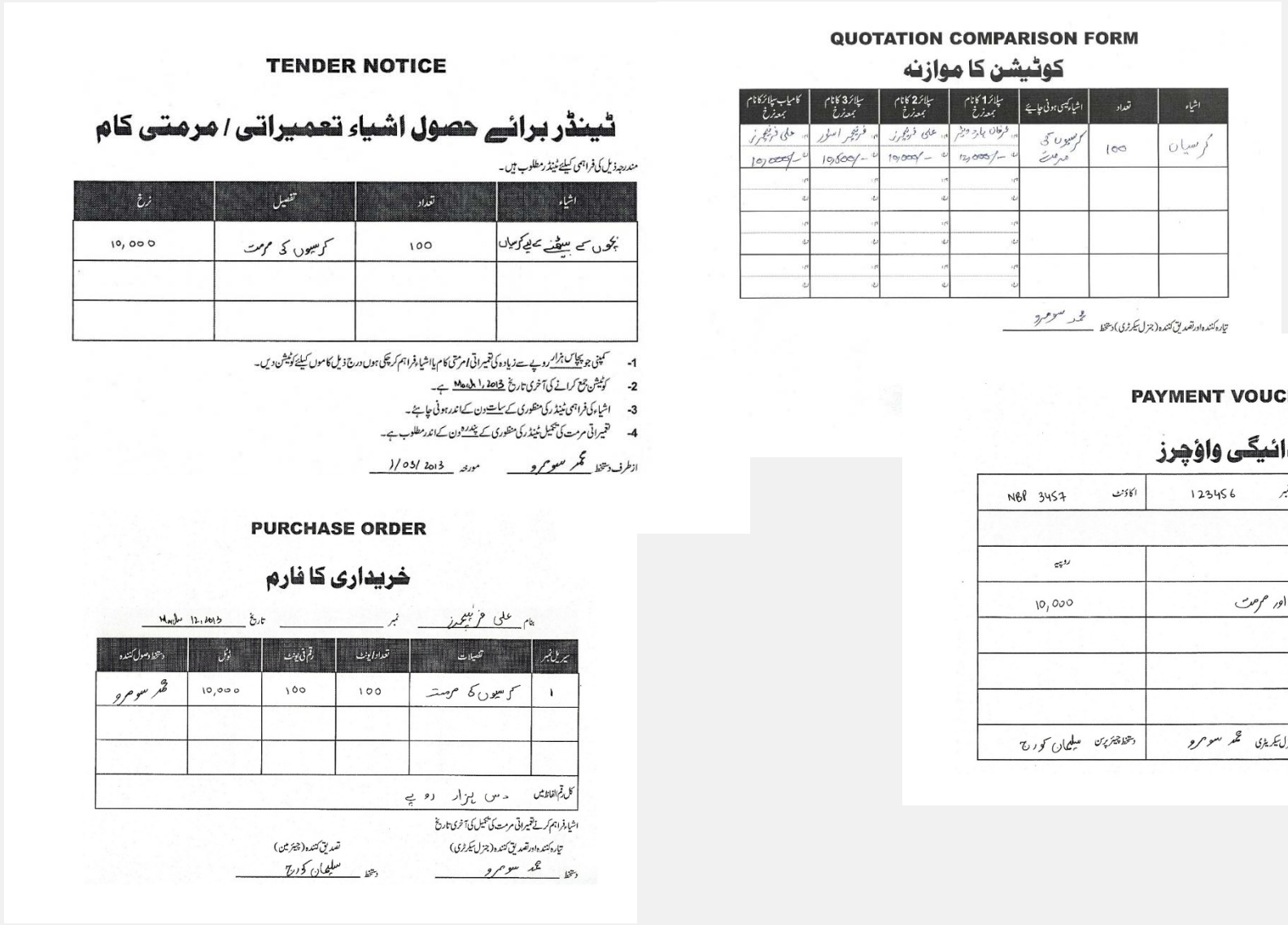
Page 1

Figure 25: Extract from Executive Body Meeting Script



TENDER NOTICE

ٹینڈر برائے حصول اشیاء تعمیراتی / مرمتی کام

مندرجہ ذیل کی فراہمی کیلئے ٹینڈر مطلوب ہیں۔

اشیاء	تعداد	تفصیل	نرخ
بچوں سے بیٹھنے کے لیے کرسیاں	۱۰۰	کرسیوں کی مرمت	۱۰,۰۰۰

1- کمپنی جو پچاس ہزار روپے سے زیادہ کی تعمیراتی او مرمتی کام یا اشیاء فراہم کر چکی ہوں درج ذیل کاموں کیلئے کوٹیشن دیں۔

2- کوٹیشن جمع کرانے کی آخری تاریخ Mar/ل 1, 2013 ہے۔

3- اشیاء کی فراہمی ٹینڈر کی منظوری کے سات دن کے اندر ہونی چاہئے۔

4- تعمیراتی مرمت کی تکمیل ٹینڈر کی منظوری کے پندرہ دن کے اندر مطلوب ہے۔

ازطرف دستخط محمد سومرو مورخہ 1/05/ 2013

QUOTATION COMPARISON FORM

کوٹیشن کا موازنہ

اشیاء	تعداد	اشیاء کیسی ہونی چاہیے	سپلائر 1 کا نام بمعہ نرخ	سپلائر 2 کا نام بمعہ نرخ	سپلائر 3 کا نام بمعہ نرخ	کامیاب سپلائر کا نام بمعہ نرخ
کرسیاں	۱۰۰	کرسیوں کی مرمت	۱۔ فرحان پارٹ ویئر ن۔ 12,000/-	۱۔ علی فرنیچرز ن۔ 10,000/-	۱۔ فرنیچر اسٹور ن۔ 10,500/-	۱۔ علی فرنیچرز ن۔ 10,000/-
			۱۔ ن۔	۱۔ ن۔	۱۔ ن۔	۱۔ ن۔
			۱۔ ن۔	۱۔ ن۔	۱۔ ن۔	۱۔ ن۔
			۱۔ ن۔	۱۔ ن۔	۱۔ ن۔	۱۔ ن۔

تیار کنندہ اور تصدیق کنندہ (جنرل سیکرٹری) دستخط محمد سومرو

PAYMENT VOUCHER

ادائیگی واؤچرز

تاریخ Mar/ل 12, 2013	واؤچر نمبر 123456	اکاؤنٹ NBP 3457
وصول کنندہ محمد سومرو		
تفصیل		روپیہ
۱۰۰ ٹکڑی کی کرسیوں کا رنگ اور مرمت		۱۰,۰۰۰
دستخط وصول کنندہ محمد سومرو	دستخط جنرل سیکریٹری محمد سومرو	دستخط چیئرپرسن سلیمان کوراج

PURCHASE ORDER

خریداری کا فارم

بنام علی فرنیچرز نمبر ــــــ تاریخ Mar/ل 12, 2013

سیریل نمبر	تفصیلات	تعداد اونٹ	فی اونٹ	ٹوٹل	دستخط وصول کنندہ
۱	کرسیوں کی مرمت	۱۰۰	۱۰۰	۱۰,۰۰۰	محمد سومرو
کل رقم الفاظ میں دس ہزار روپے					

اشیاء فراہم کرنے تعمیراتی مرمت کی تکمیل کی آخری تاریخ

تیار کنندہ اور تصدیق کنندہ (جنرل سیکرٹری) دستخط محمد سومرو

تصدیق کنندہ (چیئرمین) دستخط سلیمان کوراج

Figure 26: Sample Tender Notice, Quotation Comparison Form, Purchase Order and Payment Voucher

CASH BOOK

کیش بک

نوٹ: تمام آمدنی اور اخراجات کا اندراج کیش بک میں کرنا ضروری ہے۔

کیش بک: Mardan cash book بابت ماہ: March سنہ 2013

تاریخ	تفصیل آمدن	رسید نمبر	رقم	بیلنس	تاریخ	تفصیل خرچ	رسید نمبر	رقم	بیلنس
1/03/2013	SMC funds		23,000	23,000	12/03/2013	کرسیوں کی مرمت	123456	10,000	13,000

Figure 27: Sample Cash Book

STOCK REGISTER

اسٹاک رجسٹر (مال بھی)

نمبر شمار	چیز کا نام	مقدار	قیمت	کہاں سے خریدی گئی	آرڈر نمبر اور تاریخ	مال کی وصولی کی تاریخ	رسید نمبر	اٹھانے کی جگہ اور استعمال کنندہ	تبصرہ
1	کرسیاں	100	10,000	علی فرنیچرز	123456 March 10, 2013	March 12, 2013	123456	سکھل میں ہکی جماعت سے بچوں کے لیے	آپکے کرسی کا پیندان ٹوٹ گیا ہے۔

Figure 28: Sample Stock Register for EB Participants

Annex 7: Sorting Algorithm

The CDP was regularly receiving large amounts of data in the form of SMS messages sent to the portal by village-level participants. It was crucial that the project team was aware of what this data meant: what were issues of common interest at the local level? How were participants reacting to the portal? What was the percentage of junk to non-junk messages being received by the portal? In order to streamline the process of analyzing these messages, they was diverted into different data buckets, based on their content. This 'sorting' of data was achieved through an algorithm which is explicated in this annex.

Messages received on the portal were tagged manually. This was done primarily to cater for multiple languages being used on the portal. The reason for tagging these messages was that this allowed real-time and future options for analysis on the data that was being generated in the form of accumulating SMS messages received from village participants. For example, data managers and analysts could analyze trends in terms of what the key issues were in the education sector simply by looking at the number of times a keyword – such as "SMC" – was used.

The CDP portal had the capability of tagging a single message with multiple tags. However, multiple messages could not be tagged in one go. If multiple messages could be tagged simultaneously, then the process of tagging messages would take lesser time, something that could be improved in the design of similar portals established in the future.

As discussed in Section 8, specific keywords were used to tag all incoming messages. The list of these keywords with their descriptions is reproduced below:

Table 18: Sorting Categories

Sr. #	Keyword	Description
1	Junk	Incomplete or irrelevant messages
2	Teacher	There was an issue with the teachers in the school, including teacher absenteeism and teacher quality
3	Infrastructure	The structural integrity of the school was in question, or the amenities provided within the structure were insufficient
4	Facilities	Messages that mentioned facilities such as bathrooms and drinking water or provision of desks and chairs
5	Learning	Issues such as poor quality of classroom instruments or instruction or the like which affected students' learning at schools
6	SMC Fund	Queries or suggestions about the annual fund provided to SMCs
7	Textbooks	Complaints or suggestions related to the books used at school. Issues included a lack of books, incomplete or torn texts or no books at all
8	SMC	Suggestions and queries about SMCs in local schools
9	Thanks	Messages containing notes of appreciation for the project or for community champions
10	Education Department	Used for messages which covered broad suggestions or queries regarding the state of education at schools such as whether it was simply good or poor, or if more attention should be given to

		education by the government
11	Parent	Messages pertaining to the role of parents in education within the local community
12	Flood	Mention of floods as a reason for poor educational performance in schools and suggestions about how the impact of floods could be mitigated
13	Executive Body	Questions and suggestions about the functioning of the Executive Body of the SMC
14	SMS Campaign	Queries or suggestions which directly mentioned the SMS campaign being rolled out by the World Bank
15	Stipend	Discussion about the stipend being provided at the school level
16	S.I.P	Conversations around School Improvement Plans
17	Budget	Questions about the budgeting practices at the school, both in terms of SMCs and overall budgetary allocations from the government
18	Miscellaneous	All other items of discussion

If it was not clear whether a message belonged to any of the other 17 categories, then it was tagged as "Miscellaneous". While most categories are self-explanatory, it would be important to describe the types of messages that were marked as junk. An important point to note is that while the portal identifies messages at times as *Junk*, *Junk2* and *Junk3*, these categories were formed for internal use by the team after the number of junk messages shot up. However, there is no differentiation between the three categories and all three primarily deal with similar junk messages.

A significant number of messages that were received on the portal were empty messages. Since these did not add any value to the discussion being generated through the portal, they were tagged as junk. Certain messages were incomplete, in the sense that while they provided identifiers of individuals, schools or communities in the form of village codes and SEMIS codes and were being received from registered participants, they were either incomplete or contained irrelevant information. An example of an *incomplete* message would be one which contained the following information: "JDM our school has". An extreme example that illustrates an *irrelevant* message would be: "the economy of Punjab province is performing better this year". A subcategory of irrelevant messages was one in which the sender appeared to be attempting to have a casual conversation using the portal, or was forwarding content that was not relevant to the project. Such messages sent during the project cycle included – inter alia – poetry, domestic news and political affairs of region.

For incomplete messages however, a caveat is in order. At times, a message was too long and was thus, broken into two messages, causing the first to be incomplete and the second to be nonsensical. However, if the two were put together, one complete, relevant message could be formed. Messages were split if they were more than 160 characters long if sent in English, or more than 68 characters long if sent in Urdu or Sindhi. M3Tech – the primary IT partner on the project – merged all messages that appeared to be split if they were received within a very short duration (1-2 minutes), since this signaled that the first incomplete message and the second message without a beginning constituted two halves of the same message. Most of this merging was undertaken manually.

Annex 8: Project Cost Estimates

Cost-effectiveness analysis of the project provides additional depth to our understanding of the impact of the project. This section lays the foundations of such an analysis, by highlighting the assumptions made in distributing costs across different project components, and specifying the magnitude of these costs.

Assumptions for Cost Distribution:

1. SMC villages are 119 in number (12,258 participants). SMS villages re 111 in number (13,384 participants).
2. 2/3rd of the cost of "Development of Audio Tapes" is attributed to Intervention 1 (SMC) and 1/3rd of the cost is attributed to Intervention 2 (SMS).
3. For "Executive Body Meetings", cost is averaged over multiple schools in the same village.
4. For "Honorarium for ADOs", total cost is divided across the four months when honorariums were given: Feb-May 2013. Monthly exchange rates are used.
5. For "Half Day Workshop for District Officials", the exchange rate for the month of January 2013 is used.
6. For "Consultants' Fees for Portal Management", "SMS Charges", "Credit Transfer to Participants", "Credit Transfers to Community Volunteers" and "IVR Calls", monthly PKR to USD exchange rates are used.
7. For all "Monitoring Costs", average PKR to USD exchange rate is used for the year 2013 (duration of contract for SPDC).
8. For "Staff Time" in Total Fixed Development Cost and "Additional Staff Time" in Total Variable Cost, average PKR to USD exchange rate is used for the year 2012 in case of design costs, and for the year 2013 in case of implementation costs. All costs for "Staff Time are split equally across the three interventions. All costs for "Additional Staff Time" are split equally across the three interventions, with the exception of additional monitoring costs of the portal which are built into the cost estimate provided for Country Office implementation costs for intervention 2.
9. "Opportunity Cost for Participants" is calculated as: (Daily Wage / 2) x Number of Participants. For the Intervention 1, villagers were advised to conduct a second, non-facilitated meeting after the first general body meeting had been conducted by the project team. The strong assumption is made that in all Intervention 1 villages, the second non-facilitated meeting was conducted with the same participation rate as the first. Therefore, for Intervention 1, the overall opportunity cost is multiplied by two.
10. Daily wage approximated to be PKR 333, as per HIES 2010-11. Conversion to USD done using average PKR to USD exchange rates for 2012 & 2013
11. Source for PKR to USD exchange rate: "Sources: Monthly Statistical Bulletin, Annual Report of SBP and International Financial Statistics (IFS)
12. All costs are given in USD.

Cost Item	Contracting Partner	SMC		SMS		Capacity Support	
		Unit Cost (Village)	Total Cost	Unit Cost (Village)	Total Cost	Unit Cost	Total Cost
Fixed Development Cost							
Development of Audio Tapes	JWT		691		346		
Printing of Pamphlets/Posters	Weitek Group	13	1,500	13	1,500		
Staff Time	World Bank						
Staff/Consultants (HQ)			22,088		22,088		22,088
Staff/Consultants (Country Office)			2,803		2,803		2,803
Total Fixed Development Cost			27,083		26,737		24,891
Variable Cost							
Implementation							
General Body Meetings	Weitek Group	174	20,000	174	20,000		
Executive Body Meetings		87	10,348	87	9,652		
Honorarium for ADOs	Reform Support Unit					29	3,320
Half day workshop for District Officials							
Logistics							205
Refreshments							308
Operational Costs of Portal							
Consultants' Fees for Portal Management	M3Tech				9,286		
SMS Charges					10,593		
Credit Transfer to Participants					1,398		
Credit Transfers to Community Volunteers					86		
IVR Calls					1,202		
Monitoring Cost							
Staff Fee	SPDC						
Nadeem Ahmed			2,457		2,457		
Manzoor H. Memon			1,422		1,422		
Reimbursable Expenses							
Hotel, subsistence			1,970		1,970		
Local transportation			2,463		2,463		
Intercity transportation			985		985		
Additional Staff Time	World Bank						
Staff/Consultants (HQ)			14,911		14,911		14,911
Staff/Consultants (Country Office)			5,550		12,347		5,550
Opportunity Cost for Participants			51,235		22,564		
Total Variable Cost			101,976		111,632		24,294
Total Project Cost			129,058		138,368		49,185

Annex 9: Data on IVR Calls

Annex 3 provided details on the content of IVR calls. Chapters 7 & 8 provided the rationale for these external nudges and descriptive statistics on responses to these calls. Annex 9 brings these three parts of the report together to illustrate IVR responses in the form of tree diagrams.

IVR Calls in Round 1:

During the first round, 4 calls were made to village participants.

For the first call, 4,427 participants were reached out to, of which 1,249 participants successfully responded to the question posed about meeting participation. Most participants had attended the first village meeting.

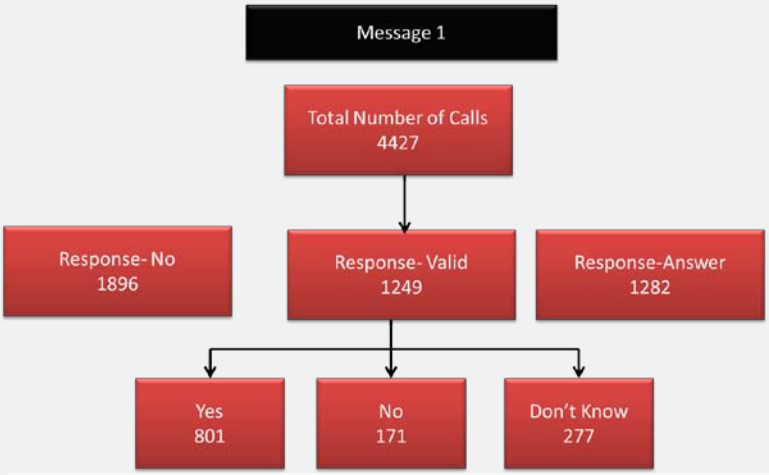


Figure 29: Responses to Message 1 (IVR Calls - Round 1)

For the second call, 4,427 participants were reached out to, of which 1,370 participants successfully responded to the question posed about preferred language for SMS messages. Most participants preferred Sindhi as the language for informational and summary SMS messages sent to them.

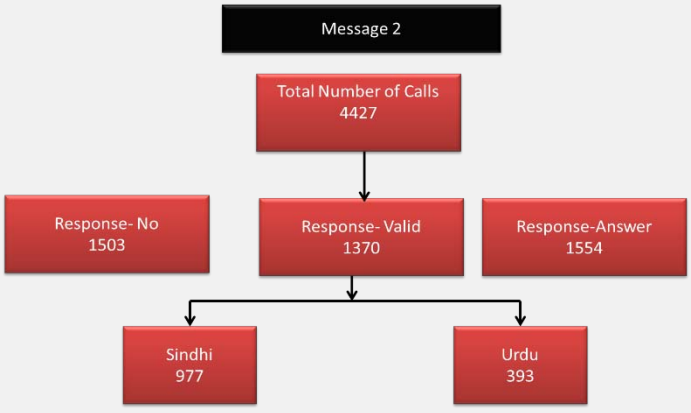


Figure 30: Responses to Message 2 (IVR Calls - Round 1)

For the third call, 4,427 participants were reached out to, of which 1,255 participants successfully responded to the question posed about participants' engagement in the CDP portal. More than half of the participants had sent SMS messages to the CDP portal. Of those who had not, a majority had not done so because of a lack of credit balance. A significant proportion were also inactive on the portal because of mobile illiteracy. Of these, a majority found the village representatives helpful.

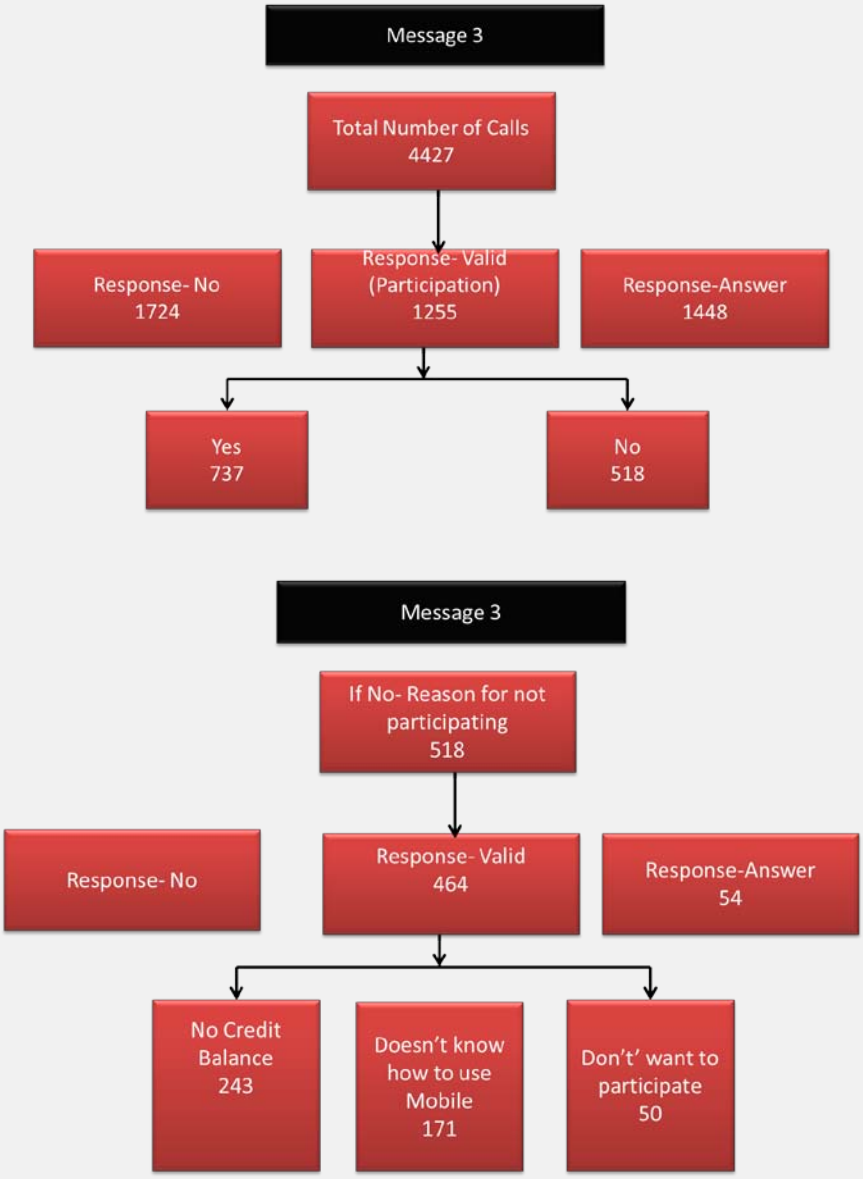


Figure 31: Responses to Message 3 (IVR Calls - Round 1)

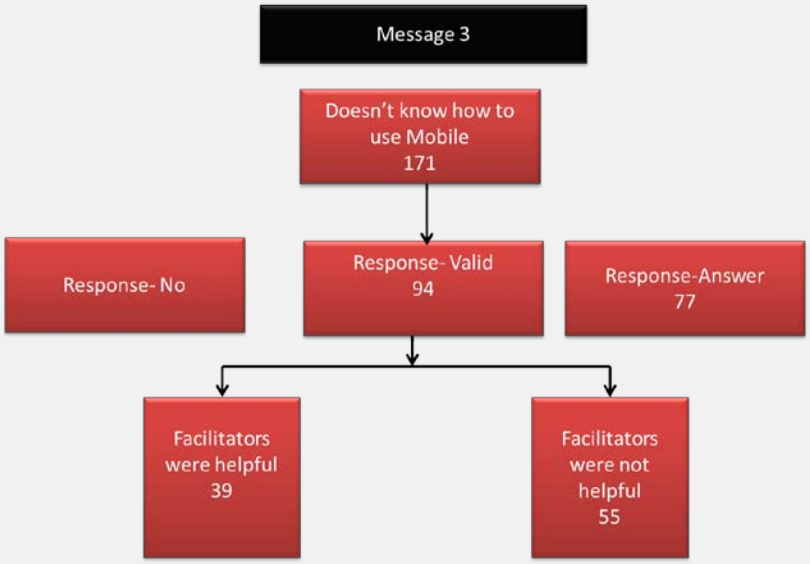


Figure 32: Yes/No Responses to Message 3 (IVR Calls - Round 1)

For the fourth and final call, 4,427 participants were reached out to, of which 1,124 successfully responded to the question posed about villagers' interaction at the community level due to the CDP project. Most participants had attended the first village meeting. A majority of respondents had had a conversation about the project with someone else in the village. Of these, a large fraction had interacted with the executive body members of the SMC.

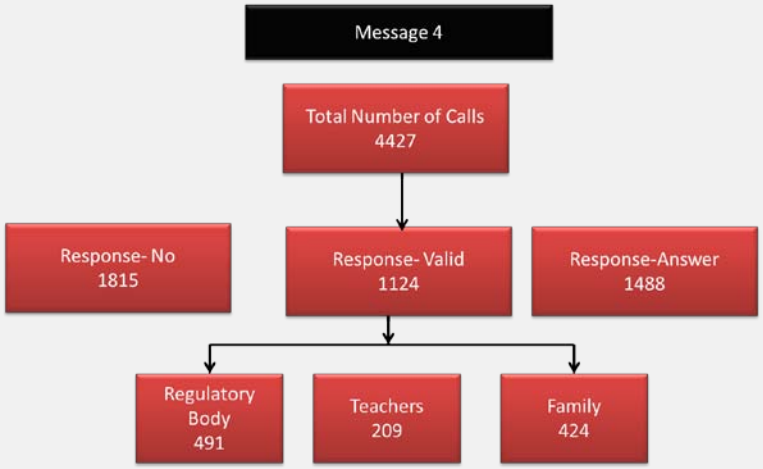


Figure 33: Responses to Message 4 (IVR Calls - Round 1)

IVR Calls in Round 2:

During the second round, 4 calls were made to village participants and 2 calls were made to village representatives.

Participants:

For the first call, 4,427 participants were reached out to, of which 876 participants successfully responded to the question posed about changes brought about by the CDP project. Most participants believed that school facilities had undergone the biggest changes, followed by teacher absenteeism and village-level coordination in the education sector.

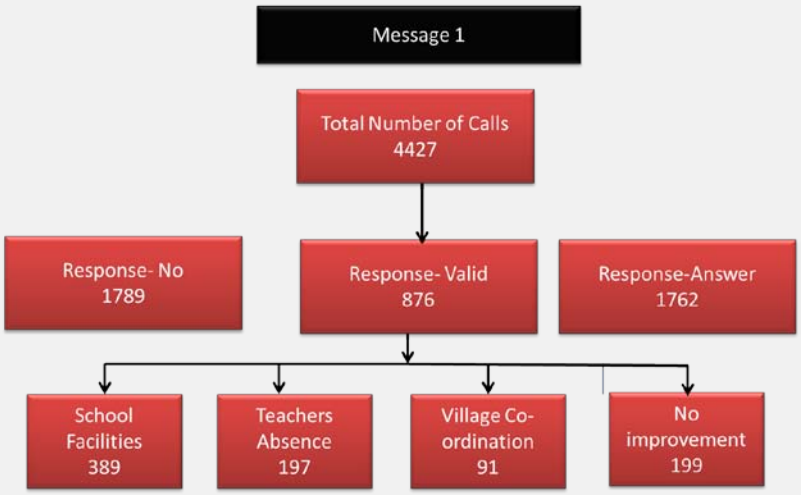


Figure 34: Responses to Message 1 (IVR Calls - Round 2)

For the second call, 4,427 participants were reached out to, of which 996 participants successfully responded to the question posed about problems faced by participants during engagement with the CDP portal. A large majority of respondents found it difficult to participate due to a lack of credit balance. However, a significant proportion also suggested that they faced no problems during participation in the project.

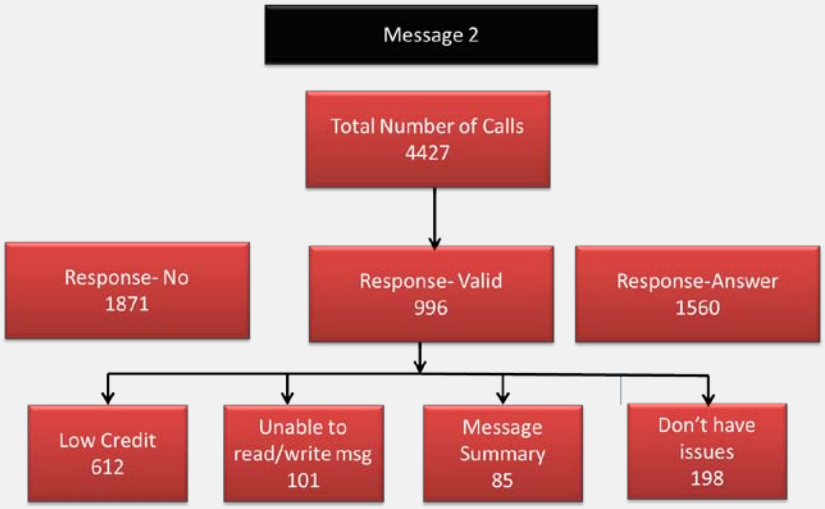


Figure 35: Responses to Message 2 (IVR Calls - Round 2)

For the third call, 4,427 participants were reached out to, of which 932 participants successfully responded to the question posed about the utility of summary SMS messages sent to participants. Most participants found these messages to be beneficial.

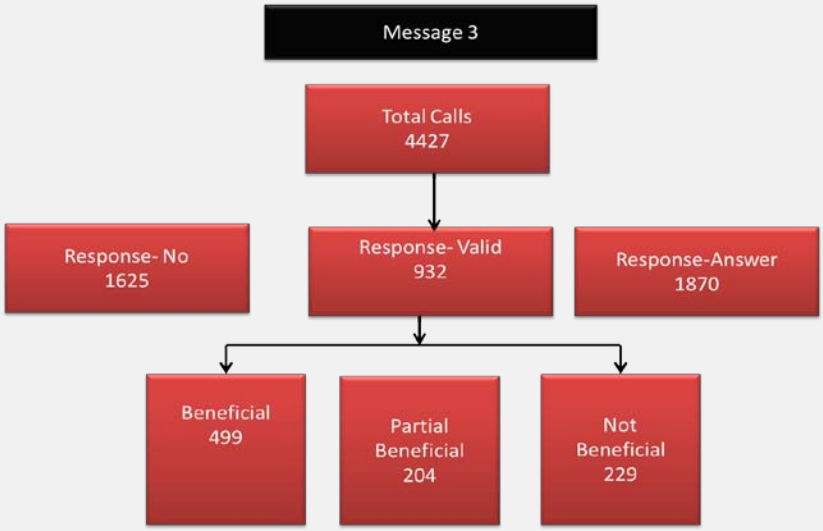


Figure 36: Responses to Message 3 (IVR Calls - Round 2)

For the fourth call, 4,427 participants were reached out to, of which 917 participants successfully responded to the question posed about changes brought about by the CDP project. Most participants had attended the first village meeting. This was the same question that was posed during the first call of this round (round 2). However, unlike responses to the first question, this time the responses were less positive. This could indicate a dip in the project's activities at the tail-end of the intervention. A majority of respondents thought that the project brought about improvements in school facilities, reduction in teacher absenteeism and increased village coordination. Remaining respondents indicated no improvements in the categories suggested

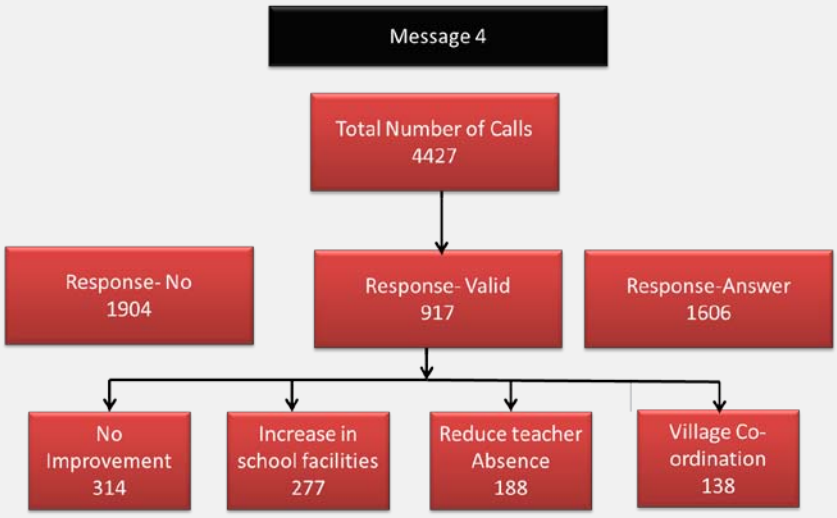


Figure 37: Responses to Message 4 (IVR Calls - Round 2)

Worth noting here is that the success rate of IVR calls (number of calls responded to successfully) dropped significantly when we move from round 1 to round 2 of IVR calls made. This is illustrated by a drop of 30% and 18% for calls 1 and 4, respectively. This suggests that interest in the project might have been lagging at the tail-end of the intervention. Future efforts must be cognizant of this issue, and should aim to sustain the level of interest amongst the participants, reflected in the response rate to IVR calls (or to make IVR calls more user-friendly).

Village Representatives

Two calls were made to village representatives. Unlike the calls made to participants, these calls did not pose questions to the representative. Rather, they provided basic information on the responsibilities of, and incentives for village representatives.

For the first call, 203 village representatives were reached out to, of which 136 representatives successfully responded to the IVR call. For the second call, 203 village representatives were reached out to, of which 140 representatives successfully responded to the IVR call.

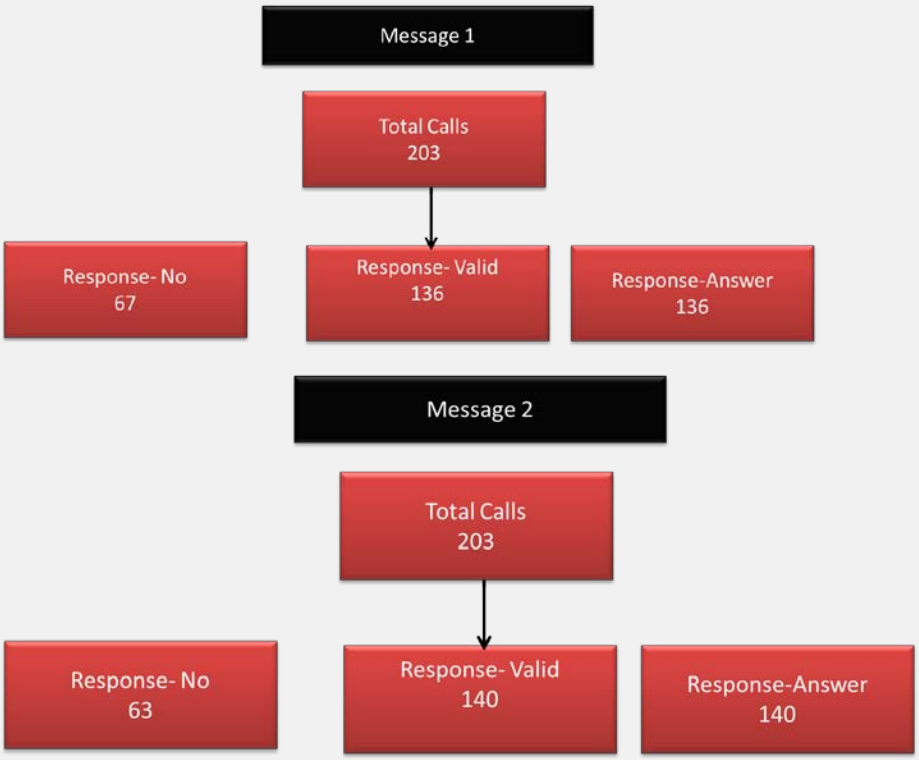


Figure 38: Responses to Messages 1 & 2 (IVR Calls - Round 2 – Community Volunteers)

Annex 10: List of Databases

Over the course of the project, multiple databases were compiled. The biggest of these was the dataset on information received on the CDP, followed by attendance, participation and registration data, among others. Annex 10 lists each of these databases and provides brief descriptions for them.

Table 19: Primary Project Data Sources

Sr. #	Database	Description and Purpose	Source
1.	Treatment Villages Dataset	Listed villages which were part of the treatment, with details on district, tehsil, UC, treatment type and village name.	Project design documents
2.	Attendance Sheets Dataset (Village Meetings) – Intervention 1	All attendance sheets were appended and the consolidated data cleaned for analysis on total number of participants, registration rates and the like. These attendance sheets were prepared for intervention 1.	General body meeting attendance sheets
3.	Attendance Sheets Dataset (Village Meetings) – Intervention 2	All attendance sheets were appended and the consolidated data cleaned for analysis on total number of participants, registration rates and the like. These attendance sheets were prepared for intervention 2.	General body meeting attendance sheets
4.	Attendance Sheets Dataset (EB Meetings)	A dataset was prepared containing number of attendees in each of the three EB meetings for every SMC in the crossover intervention.	Executive body meeting attendance sheets
5.	Dataset for School Improvement Plans	All SIPs finalized during the third EB meeting were digitized for analyzing SIP cost estimates and key focus areas for the SMCs.	School Improvement Plans
6.	Credit Transfer dataset	This dataset was provided by M3Tech and listed credit transfer dates and number of participants per village to whom credit was transferred.	M3Tech
7.	Word Bank SMS database	This raw database was an unfiltered collection of all SMS messages that had been received on the portal.	CDP
8.	Portal Database – Unique Messages Received	Provided counts of SMS messages received for 10-day buckets (starting from day 1 to day 120) for each of Intervention 2 villages.	CDP
9.	Community Volunteer Database	This dataset provided identifying and contact information about all community volunteers, as well as data on their activity on the portal as volunteers.	M3Tech
10.	Uploaded Contact Information Database	Contacts uploaded by M3Tech were provided in this dataset. It aided in triangulating the count for the number of contacts registered.	M3Tech
11.	Active & Passive Users Dataset	Listed the number of participants who were active on the CDP and also listed 'active villages'	M3Tech
12.	School Level Randomization Dataset	Listed schools which were selected to be part of the treatment in the intervention villages. Provided details such as district, tehsil, UC, GPS coordinates, address, head teacher contact information and treatment type	Project design documents
13.	EB Schools Participation Database	Provided information on the schools for which EB meetings were held, as well as dates for when these meetings were conducted.	Project implementation documents
14.	Meeting Dates and Details Dataset	General body meeting dates for all the treatment villages were provided in this dataset.	Project implementation

			documents
15.	IVR Calls Dataset	This dataset was constructed using IVR data provided by M3Tech following the two rounds of IVR calls that were made to participants and community volunteers.	M3Tech
16.	SMS Keywords Dataset	The Keywords dataset aided in analyzing key areas of concern for participants through the construction of a word cloud.	CDP
17.	Available Funds Dataset	Information on funds available in SMC bank accounts was taken from this dataset.	Project implementation documents
18.	Household Census Dataset	This dataset provided information on the total number of households in every village which was used in measuring participation rates across treatment villages.	Pre-project census