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EDUCATING 21,000+ CHILDREN THROUGH THE SABAQ INITIATIVE

A GUIDE TO SABAQ'S WORK IN NON-FORMAL EDUCATION

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Table of Contents

I.	SABAQ'S INITIATIVE AT A GLANCE.....	2
II.	EXECUTIVE SUMMARY	4
III.	SABAQ LEARNING FOUNDATION.....	5
A.	ORGANIZATIONAL PROFILE	5
B.	ONGOING PROJECTS	6
C.	PARTNERS	7
IV.	EDUCATIONAL CRISIS IN PAKISTAN.....	8
V.	OUR APPROACH	9
VI.	SABAQ CENTER MODEL FOR OUT-OF-SCHOOL CHILDREN	10
VII.	SABAQ CENTERS WITH EXTENDED SUPPORT MODEL	12
A.	RESOURCES REQUIRED FOR EXTENDED SUPPORT MODEL	12
B.	RELIABILITY OF THE EXTENDED SUPPORT MODEL	12
C.	SUSTAINABILITY OF THE EXTENDED SUPPORT MODEL	14
VIII.	METHODOLOGY	14
IX.	IMPACT	16
X.	FINANCIAL COST	17

I. SABAQ'S INITIATIVE AT A GLANCE

Problem	21,000 students at SABAQ Centers need reading books, worksheets and other resources for a better classroom experience.
Current Model	SABAQ runs community-based SABAQ Centers for highly marginalized and remote communities in Pakistan where children learn only through Tablet-based digital lessons using the SABAQ Tab.
Solution	Enriching the learning experience of children by providing them with books, worksheets and manipulatives to help them improve their learning gains.
Methodology	SABAQ intends to introduce an Educational Kit that includes reading and writing supplies at its centers.
Reliability	The materials in the Education Kit will help children improve their writing and fine-motor skills, practice math problems, better hand-eye coordination, and provide a realistic appreciation of visual and spatial concepts, which cannot be achieved through digital lessons alone.
Impact	<p>Short Term:</p> <ul style="list-style-type: none"> • Increase in children's engagement in the classroom. • Improved use of imagination using manipulatives and SABAQ content. • Develop the habit of reading amongst children, making it easier and more enjoyable. <p>Long Term:</p> <ul style="list-style-type: none"> • Better learning outcomes and higher rate of retention during lessons. • Improved literacy rates increasing the possibility of children leading better lives than their parents. • Development of mental and physical skills essential for healthy growth during adolescence.

- Better, future educational opportunities for children and improved standard of living for surrounding communities in the villages.

II. EXECUTIVE SUMMARY

Pakistan today faces an education crisis of unprecedented proportions. For the last few decades, Pakistan has placed the education sector at the backburner of its policy discourse, with a huge increase in poverty. With 22.6 million children currently out of school, those who do go to school also experience an education of poor quality. SABAQ Learning Foundation (SABAQ) a non-profit organization, designs and develops digital learning content that is curriculum-aligned, contextually relevant and highly engaging for both out-of-school and in-school children.

One of SABAQ's main initiatives is its community-based, technology-driven SABAQ Centers where over 21,000 students are learning basics of numeracy and literacy using SABAQ Tabs. SABAQ Tabs are 7" Android tablets that contain digital lessons for children from Kindergarten to Grade 5 for English, Math, Urdu and Science. SABAQ Centers is a reliable, efficient and low-cost solution that provides an efficient use of educational technology to raise standards, improve learning gains and provide accessible educational facilities to those living in remote areas of Sindh.

While SABAQ Tabs help deliver high quality, curriculum-aligned digital lessons to these children in remote areas, there is still need to add more learning resources at SABAQ

Centers. SABAQ intends to provide its centers with a low-cost Educational Kit, packed with reading and writing supplies, story books and Math manipulatives. These resources will enrich the learning environment, resulting in improved engagement and better learning outcomes for these students. Our pilot study in one SABAQ Center has already shown very positive results with these learning resources. Our objective is to raise funds to make these resources available to all of our SABAQ Centers.

SABAQ aims to collaborate with GlobalGiving and its network of funders to help generate funds needed to improve the learning environment of students at SABAQ Centers. Donations through GlobalGiving will help educate underprivileged children in disadvantaged areas of Pakistan, enabling an immersive learning experience in existing SABAQ Centers. Through our partnership with GlobalGiving, we hope to engage international donors and continue our initiative of educating children, improving the education system and engaging more communities.

III. SABAQ LEARNING FOUNDATION

A. ORGANIZATIONAL PROFILE

SABAQ Learning Foundation (SABAQ), is a non-profit organization launched in 2015 as an Education Technology solution. It seeks to resolve fundamental issues affecting the education system in Pakistan. These issues have presented themselves in the form of critical gaps within the education provided in public and low-cost private schools and 22.6 million out-of-school children.

To help close these gaps, SABAQ works in low-cost public schools and the non-formal education sector where the quality of content is low and education is nearly inaccessible. This has been done through its digital solution in the shape of the SABAQ Tab, a 7" Android tablet containing the complete Kindergarten to Grade 5 content; the SMART

Kit, a device to convert any LED and projector display into a SABAQ teaching resource; gamified apps and the SMART monitoring and evaluation portal.

SABAQ aims to make educational facilities more accessible and engaging. In the formal education sector, our digital solutions have been adopted in over 2,972 schools across Pakistan with an outreach of just 54,000 students in Sindh and Punjab province alone. But more importantly, in the non-formal education sector, SABAQ has established 509 SABAQ Centers in three districts of the province of Sindh with an outreach of 21,369 children. However, its efforts in rural areas of Sindh pose a number of challenges that SABAQ aims to resolve using donations from the GlobalGiving Accelerator. Through these donations, SABAQ intends to make its centers more sustainable and impactful for the children that it educates. Donations will add value to existing SABAQ Centers and enhance children's learning experience

B. ONGOING PROJECTS

SABAQ has developed digital portals for networking, applications for school management and analysis, android and iOS-based games, and monitoring and evaluation applications. SABAQ portals and platforms are currently in use by over 70 Civil Service Organizations; program evaluation web portals, and monitoring and evaluation applications are in use by 700+ schools. In addition, SABAQ has an expert Content Development Team, which has created over 300+ video-based lessons for Kindergarten to Grade 5 students. These video lessons, used by over 55,000 students across Pakistan, have been created by an in-house team of expert animators, illustrators, and visual artists. The software that is developed is currently trilingual, offering content and assessments in *Urdu, English and Sindhi*, as clients require. Details of ongoing major projects are presented below:

The SEF Project is a 2-year project contracted by Sindh Education Foundation (SEF). The target of the project was to create proprietary, customized, K-5 digital learning system for Science, Math and English subjects in one national and one regional language, namely, Urdu and Sindhi. By undertaking this project, SABAQ has developed the expertise in content creation (especially in three different languages), field implementation support for schools across Sindh province, and familiarized itself with the challenges facing Pakistan's education system. The curriculum developed for SEF

has been pegged with assessments, teacher support guides and videos, trainings and tablet-based monitoring tools which has tremendously increased SABAQ's knowledge of the educational content and how it should be disseminated. Moreover, since it was the first time that SEF schools introduced digital content in their 600 schools, implementation support and guidelines were also provided by SABAQ.

Similarly, the SABAQ Project which requires help from Global Giving is an on-going 3-year project funded by the UK Department of International Development (DFID) through IIm Ideas 2 Education Innovation Program. The target of this project was to pilot and help scale technology-led, innovative education solutions, for out-of-school and in-school students. For the project, SABAQ's team of academics and animators are developing Kindergarten to Grade 5, tablet-based content for Math, Science, Urdu, and English in local and regional languages. Since then, this material has been used in 500+ non-formal SABAQ Centers and through partnerships in 350+ existing schools across the country. SABAQ has provided high quality education access to 21,000+ out-of-school children and 30,000+ in-school students through its rigorous tablet-based monitoring and evaluation application and web portal data management. The project now aims to improve its classroom experience by providing Educational Kits to its students and adopt a more holistic approach to education. These Educational Kits will aid in the development of cognitive, critical and problem-solving skills in the children. Therefore, sustainability of these centers along with a sufficient revenue stream for their continued maintenance is also a project target.

For samples of our video-based content please view the following links:

- https://www.youtube.com/channel/UCR-oO6U_KfEd_iYtYsP4HBA
- <https://www.facebook.com/merasabaqPK/>
- <https://twitter.com/merasabaq>
- <https://www.instagram.com/mera.sabaq/>

For more information about our technology and education organization please visit our website <http://sabaq.edu.pk/>

C. PARTNERS



IV. EDUCATIONAL CRISIS IN PAKISTAN

Critical gaps within Pakistan's education system has had damaging effects on primary students and our youth. The most resounding issues are inadequate teacher capacity leading to low learning outcomes, poor quality learning materials leading to low student engagement, and lack of access to educational facilities. This inaccessibility to educational facilities has left 22.6 million children out-of-school, creating a severe lack of basic literacy and numeracy skills in students. For instance, in Sindh province in Pakistan, communities experience a lack of educational facilities for primary education. Whereas, schools experience a lack of good quality teaching and resources. Research carried out by Alif Ailaan, a campaign funded by the UK Department for International Development (DFID) found that Sindh ranked 7th out of 8 provinces in Pakistan's District Education Rankings 2017. This score included learning scores, retention scores and gender parity scores. Therefore, SABAQ believes that giving young children access to books (fiction, non-fiction, and picture books), writing material and manipulatives is critical to supporting their ability read, write and think creatively. To ensure this happens, SABAQ is working to provide a holistic teaching solution for 509 centers in Pakistan.

V. OUR APPROACH

SABAQ, with the help of aid from UK Department for International Development (DFID), created a community-based and technology driven education solution. This solution was created in the form of SABAQ Centers, to resolve the issue of low-quality education and accessible educational facilities to children across Pakistan. SABAQ's digital platform allows improved accessibility for children in remote localities to educational facilities. Whereas, our content based on the National Curriculum and produced by a team of highly experienced academics and animators means high-quality of education. SABAQ's easy and fun-to-learn content helps engage young students, increases learning outcomes and improves rate of retention during lessons. Similarly, detailed lesson plans and training modules help increase teacher competency and the smooth integration of technology in the classroom.

SABAQ now aims to make children's learning experience more holistic and aid learning through tablets with the use of an educational kit. This Education Kit consists of a variety of reading material, manipulative activity tools and writing supplies designed to assist children in developing the appropriate skill-set for their age-group. It acts as a supplement to the knowledge obtained through technology and helps children in practical applications of the same in a hands-on manner. The provision of a holistic classroom experience through technology and Educational Kits for children is the first step in resolving the problems that currently plague Pakistan's education system. While educational resources will support learning of conceptual, problem-solving, cognitive and pre-writing skills, using SABAQ tablets, children will acquire the digital literacy required in today's world.

VI. SABAQ CENTER MODEL FOR OUT-OF-SCHOOL CHILDREN



The SABAQ Center model for non-formal education uses digital lessons developed by SABAQ for primary grades with the aim to digitize education, increase teacher competency and enhance students' learning outcomes in basic literacy and numeracy. It works to empower 21,369 children by providing an alternate educational avenue, especially for those living in remote areas. SABAQ has established 509 SABAQ Centers in three districts of Sindh province in Pakistan, namely Mirpurkhas, Tando Allayaar and Tando Muhammad Khan.

Total SABAQ Centers to date	509
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Learners enrolled	21,369
No. of Learners mainstreamed into formal schools	552
Fee collected	6083 USD
Total facilitators (both male and female)	490
Female facilitators	82

This model is based on a pilot implemented in three districts of Sindh where there is a significant gap in the provision of quality education that provides a holistic classroom experience. There are many reasons why filling this gap using the SABAQ Tab has proved beneficial for the community and fulfilled its social needs. Parents and teachers value the use of technology for education since they have limited awareness about how technology can be used in education. This has encouraged parents to adopt technology, especially in primary years. Moreover, the sharing of tablets amongst students fosters peer-to-peer learning and collaboration. This encourages meaningful engagement between teachers and students, while teaching students basic digital literacy. The socially inclusive design of SABAQ's software offers its content in three languages (Urdu, English and Sindhi) in a localized context for a better understanding. This education has helped transform community behavior and parents attitudes towards educating children. For instance, witnessing the impact of SABAQ Centers on children, has encouraged parents to highlight this issue with the government. Some have also campaigned to reopen existing government schools in their villages.

In 2017, to test the above-mentioned hypotheses and the effectiveness of its model on out-of-school children, SABAQ carried out a third-party evaluation under the supervision of Coffey International, U.K. This assessment proved that children learned more effectively using SABAQ digital lessons in comparison with the control group. The control-treatment study was conducted with baseline and end-line assessment using ASER-based tests for Urdu and Math. It resulted in 3 times and 2.5 times improvement in learning outcomes in Math and Urdu respectively among children using SABAQ compared with those who didn't use SABAQ during the test period

VII. SABAQ CENTERS WITH EXTENDED SUPPORT MODEL

A. RESOURCES REQUIRED FOR EXTENDED SUPPORT MODEL

SABAQ currently provides content for six grades – Kindergarten to Grade 5 using the SABAQ Tab. While the children are taught English, Math, Urdu (aligned with Pakistan’s National Curriculum), the project aims to transform their educational learning process to one which would provide a better understanding of numeracy and literacy.

Keeping this in mind, SABAQ’s proposed Education Kit will contain the following materials:

- Reading Books: SABAQ will provide 15 reading books to each center, of which 5 will be in the English Language and 10 in Urdu Language. Not only will reading at a primary level improve literacy and inculcate the habit in early years, it will also improve their concentration skills. Additionally, reading will allow students to use their imagination in a manner where interactive digital lessons lack.
- Manipulatives: SABAQ will provide a set of Math manipulative tools to each center, in order to advance their fine motor skills, hand-eye co-ordination, and spatial and visual discrimination. Through block building activities, children will be able to learn how to assemble things and recognize shapes and colors.
- Writing Supplies: SABAQ will also provide each child with a Math and Urdu Language workbook, where they can put into practice the skills they are currently learning through tablets. Usage of black and white colors will further enhance the motor skills crucial for a child’s balanced development. SABAQ will also provide every child with a personal notebook that can be used for further practice on an individual basis during after-school hours.

The use of SABAQ’s tablets and this Education Kit fulfills the requirements to give each child a well-rounded education and allow for their healthy growth and development.

B. RELIABILITY OF THE EXTENDED SUPPORT MODEL

The reliability of SABAQ Centers with the Extended Support Model can be deduced from the six elements which contribute towards its sustainability:

- Learning with technology – the SABAQ tablet offers interactive lessons for improved learning outcomes. It can be used as a supplementary tool for in-school students and a source of academic content for out-of-school children.
- Data-driven program – Centers are monitored through extensive data collection and analytics for continuous program improvement, and to monitor the performance of students and teachers. This is done through SABAQ's SMART M&E portal which gives real-time insight into teacher performance and student progress. The SMART portal helps hold teachers accountable for their work by creating an effective feedback system. A pattern is then derived from the set of data obtained overtime which also helps with product development in the long-term.
- Academic support to teachers – SABAQ's cluster-based mentor programs help facilitators stay up-to-date with new and interactive methods of teaching, technology and new academic content.

Additionally, the Education Kit will provide reliability in terms of engaging students mentally as well as physically. Included in it are a list of reading books in both English and Urdu, activity supplies to help students apply their concepts realistically, and workbooks to teach them necessary childhood motor skills, like pencil-grasping and drawing.

Moreover, the remaining core of this model is based on community engagement and contribution. These three elements of the model are:

- Centers within villages – SABAQ Centers are set up within the village in a space donated by the community. This allows for a cost-effective budget and efficient use of resources.
- Community fully engaged – SABAQ sets up Village Education Committees (VEC) that supervise the learning at the SABAQ Centers.
- Community Education Fund – Parents contribute towards an Education Fund, increasing their involvement in children's education. This contribution will be used to pay the teachers employed at SABAQ Centers after the end of the project. This promises the centers continuity long after the end of the project.

C. SUSTAINABILITY OF THE EXTENDED SUPPORT MODEL

Moreover, SABAQ Centers with the Extended Support Model have a number of mechanisms in place which contribute to its sustainability and works to improve learning outcomes for children.

- First, classroom teachers are chosen from within the village community which creates a sense of empowerment in teachers and the financial gain incentivizes the continued functioning of SABAQ Centers.
- Second, parents contribute towards a Community Education Fund per month, which makes them more accountable for their child's education.
- Third, using space provided by the community and appointing teachers from within the community efficiently mobilizes resources available within villages and increases community involvement. Contributions by our 500+ communities are estimated at \$225,000 annually – school fee at \$120,000, space rent at \$90,000 and electricity to charge the SABAQ Tab at \$15,000.
- Fourth, the combination of SABAQ Tabs and Educational Kits will help students improve their reading, writing and Math skills while also allowing real-life application of their knowledge. For instance, the physical act of reading Urdu books will enhance the learning of concepts established by the interactive tablet. Since most children lack the technological exposure that the SABAQ Tablet provides, the Education Kit will smoothen the experience of teaching concepts whilst also providing children digital literacy.
- And fifth, SABAQ's cluster-based mentor program works on improving facilitators capacity to teach while our SMART monitoring and evaluation portal carries out extensive data collection and analytics for continuous teacher improvement and monitoring of students' learning progress.

It is these elements of the model and mechanisms which contribute to the continued sustainability of SABAQ Centers.

VIII. METHODOLOGY

SABAQ Centers are aimed at serving the wider community in fighting illiteracy and educational disparity in Pakistan. For purposes of accountability, a Village Education Committee (VEC) overlooks the running of the SABAQ Center along with its facilitator. There is also a voluntary contribution of 50 PKR per child, equivalent to a sum as low as \$0.40 USD, taken from parents which serves as a source of funds to help improve the learning conditions of the Centers. When parents make contributions, it helps increase class attendance as parents tend to become more engaged and involved in the education of their children.

Every SABAQ Center is in operation for 4 hours per day, five days a week. During this time, a cohort of 40 students – divided into two groups of 20 each – learn early-grade numeracy and literacy. Each group receives 2 hours of instructions. One SABAQ Tab is shared amongst two to three children at a time, so as to encourage collaboration and keep operational costs low. SABAQ aims to help build concepts using the tablet and strengthen them using the Educational Kit. For instance, children struggling with Urdu concepts can be introduced to SABAQ's original series for Urdu letter formation called "Alif Say Yay" or students with weak mathematical skills can be introduced to a similar series called "Bay Hisaab Math". Each center is visited twice a month by mentors from the National Rural Support Program (NRSP), our implementation partner, whereas SABAQ field monitoring officers visit once a month. Classroom observations are carried out to assess the performance of facilitators and students, which are recorded on our proprietary data analytics platform. Facilitators carry out monthly assessments to record the performance and learning outcomes of students.

The Extended Support Initiative at SABAQ Centers will ensure that children have access to books in the school classroom and that using books, both alone and together as a class happens every day. The Education Kit will provide reading books to establish basic literacy skills, manipulatives for numeracy and writing supplies for practice. The reading books will be introduced using two useful approaches, namely the oral reading approach and the independent reading approach.

Oral reading is when a teacher reads a book to the class or a group of students. When using this technique, the teacher will read the book so that each student, regardless of their ability, is engaged and is able to enjoy the words and story. An oral reading session will take place every day for 15 minutes at the center, choosing a different book to read each day of the week. There are four parts to a successful oral reading session:

1. Introducing the book
2. Reading the book (3)
3. Talking about what you are reading (4)
4. Reflecting on the session

On the other hand, independent reading will encourage students to choose to read, selecting what they want to read and then being able to share what they have to read. Facilitators at the SABAQ Centers will create four elements that will encourage students to read independently. These are:

1. Choosing reading material (2)
2. Creating space and time for reading (3)
3. Responding to what's been read (4)
4. Developing a reading culture.

The reading material has been carefully chosen by SABAQ's academic experts and includes a mix of fictional, non-fictional and picture books. SABAQ has also allocated time for children to undertake reading independently and encourage them to discuss what they have read. These approaches will help teachers meet the diverse needs of the students and ensure that the way in which books and other written materials are used is varied and interesting. Varying reading approaches will also help sustain the enthusiasm and engagement of the students.

Similarly, manipulatives will also be provided as part of the Education Kit to give students a better understanding of mathematical concepts. Whereas, writing materials will be provided to allow children to practice the concepts they have learnt using the tablet and the Educational Kit.

IX. IMPACT

The Extended Support Initiative will provide a holistic classroom experience to SABAQ's 21,369 out-of-school children currently enrolled in 509 SABAQ Centers. The addition of Education Kits along with the SABAQ Tab will provide basic literacy skills and the real-life application of those skills in children. For children, being able to read is essential. Children who fail to read in the early grades fall further behind each school year, since an individual's reading ability is progressively used to acquire other types of knowledge. SABAQ recognizes that helping children read and use books will build the skills

necessary to make them effective readers and make a lasting positive difference to their time at school. For instance, the oral reading approach is inclusive by nature and helps develop the child's reading comprehension, particularly their ability to inter-relate, interpret and draw conclusions from the content. Moreover, by using manipulatives children will acquire the ability to actively interrelate with concrete materials and interpret abstract mathematical concepts by means of concrete experiences. This will provide long-term permanence of mathematical skills, enabling students to integrate their knowledge and bring their mathematical ideas to a higher cognitive level.

Moreover, SABAQ's mission to provide an Education Kit to each center will be helpful in providing students a tangible equivalent to practice their learnings from the SABAQ Tab. This will hone their motor skills, while reinforcing their knowledge of concrete and abstract learnings, improving the child's learning experience and creating a more productive classroom. Through the provision of this kit, children will have access to a wider variety of resources while teachers will be able to make classrooms more exciting.

X. FINANCIAL COST

S. No.	Item	Cost/Item (USD \$)	Quantity	Total Cost/Item (USD \$)
1	Books			
1.1	Reading books (English)	\$2	1500	\$2,936
1.2	Reading books (Urdu)	\$1	5000	\$5,003
	Sub-total			\$7,939
2	Learning through playing tool kits			
2.1	Maths	\$3	2000	\$5,220
	Sub-total			\$5,220
3	Student Pack/Writing Supplies			
3.1	Student Workbook	\$1	20000	\$17,400
	Sub-total			\$17,400

Total cost for SABAQ Centers	\$30,559