



KHYBER PAKHTUNKHWA SUMMER CAMP 2017

Involving the maths and science communities



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Need

2.5 million of 7.6 million children between the ages of 5 and 16 years are out of school in the Khyber Pakhtunkhwa province. Of the children enrolled, 35% drop out before they reach middle school. Net enrolment rate for girls in primary schools is as low as 51%, dropping to just 17% in middle school and as little as 8% in high school.

Perhaps what's even more alarming is the quality of learning available in government schools in the province, the state of test scores and students' learning abilities – according to the Annual Status of Education Report 56% of Class 5 students are unable to perform two-digit division.

Intervention: including science and maths activity-based learning

Unsatisfactory learning outcomes call for inventive, yet doable initiatives to go beyond classroom education and inspire students to think about innovation, discovery and science. Such initiatives and actions can lead to heightened student interest in the subject at school.

With this goal in mind the KP Education Department and the Minister Elementary and Secondary Education, Muhammad Atif Khan Alif Ailaan met with Alif Ailaan to advocate for a Summer Camp focused on maths and science learning. The meetings conducted were fruitful and decisive action was taken to focus the summer camp on 'popular science'. The Summer Camp was to be conducted in 2000 High schools across 25 districts of KP. To demonstrate different science and math concepts using interactive methods, the ES&E Department mobilized a number of private sector institutes, non-governmental organizations, volunteer organizations and scientists to make the event a successful one. Multiple organisations were called upon to submit an Expression of Interest outlining their plan for volunteering to conduct activities during the Summer Camp on the 7th of July. Of these, maths and science activities were conducted in 57 schools.

Recommendations

There was consistent feedback from all member organisations that logistics could have been managed better. Everyone was extremely accommodating due to the short time-frame, but there is room for improvement. There were certain shortfalls in some of the districts where the rooms were



not clean, there was no alternative to electricity load shedding and some of them had no working air conditioners in the extreme humid environment of the province.

Following up with the success, this needs to become a regular occurrence within the province. Lobbying needs to be done with the parliamentarians and bureaucrats to ensure that a funding cycle for this is ensured in the yearly budget and the Education/Science department has a standing Memorandum of Understanding with these organisations to engage with students in a bigger and better way.

Implementation: members of the Pakistani maths and science community



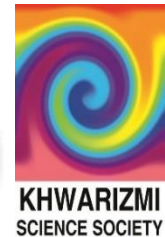
The Khyber Pakhtunkhwa Elementary and Secondary Education Department arranged a week long summer camp in 2000 government schools on 7th of August 2017. The opening ceremony held in Peshawar which was attended by Qaiser Alam (Special Secretary), Rafiq Khattak (Director Education), Sharif Hussain (Director Education Sector Reform Unit-ESRU), Arbab Muhammad Asim Khan (Nazim Peshawar) and a number of other officials.

The summer camp was partly sponsored by the Pakistan Alliance for Maths and Science members, Dawood Foundation and Pakistan Innovation Foundation. Thirteen such Alliance Partners were invited through Alif Ailaan. It is estimated that these organizations conducted activities in 57 schools in 16 of the districts and interacted with over 1700 students and 250 teachers. A number of activities designed by volunteer and partner organizations enhanced students' understanding on modern science and its inventive approaches outside the classroom's learning.





13 members and supporters of the Pakistan Alliance for Maths and Science were part of this initiative so demonstrate their dedication of a more learned Pakistan. Special mention is required for the support offered to the Elementary & Secondary Education Department by Alif Ailaan for the organisation of the Science Summer Camp.



Secretary Education, Dr. Shahzad Khan Bangash while attending on-going activities in some schools of Kohat stated, "The objective of the summer camp is to promote extra-curricular activities such as life skills, interpersonal communication, and learning through fun games, safety and rescue procedures and building leadership qualities among the students".

Special Secretary E&SED, Qaisar Alam acknowledged the participation of all individual volunteers and partner organizations including CECOS University, Peshawar 2.0, Pakistan Science Foundation, Khwarizmi Science Foundation, Robo Kids, Sabaq, Robotics Labs, Robo Tech, Pakistan Science Club, Wonder Tree, Sabaq, Numerica, Robo Minors, Robotics, LearnOBots and Numaish Karachi. The KP Summer Science ended on 14th of August 2017.



The closing ceremony was held in Mardan on the 11th of August. Minister E&SE Muhammad Atif Khan attended the event and interacted with the students and the organisations demonstrating in the school. The organisations present at this event were Numaish, Numerica and Robo Tech.



Pictures from the closing ceremony in Mardan

Feedback

Highlights of feedback from implementing partners is given below:

Robokids

“Given that this was the first experiment, and given the complexity of several cities, days, organizations, activities, schools, government departments, officials, accommodation options etc. involved, some amount of back and forth was expected and in that context the overall experience was relatively smooth and therefore commendable...It was as much an enjoyable as a learning experience for our team too.”

Knowledge Platform

“It was our second year participating in the KPK Boot Camps, and we found teachers to be more involved and boot camps to be clearly focused on Math and Science this time. We hope that this will serve as the first step towards uptake of such interventions at the government level.”

Pakistan Science Club

“Students with great excitement and enthusiasm participated in the activity and it was an amazing and worth learning experience for them.”



LearnOBots

“The initiative of KPESE, PIF and Alif Ailaan in the form of this summer camp is really going to change lives of these kids. These students got a chance to indulge in activities that only the very fortunate students get to experience in our country. The exposure that they got is going to transform their thinking. Having regular camps in which they are introduced to different technologies is beneficial. When students are allowed to link theoretical knowledge by performing hands on activities really improves the quality of education. It was a mega event and very vital initiative and I would congratulate the organizers for the successful execution. I would like to end it with saying that it was life changing experience not only for us but for the kids that were part of the programme.”



Annexure I: list of schools where activities were conducted

S#	District	Organisation	School
1	D.I Khan	Pakistan Science Club	GGHS No.3, City, DI Khan
2	Karak	Pakistan Science Club	GHSS Jehangiri, Karak
3	Kohat	Pakistan Science Club	Govt College of Management Sciences, Kohat
		Robo Kids	GHS Ostarzai Payan, Kohat
		Khwarizmi Science Society	GHS No.1, GHS No.2, GHS No.3, GGHS No.2 - Kohat City
4	Peshawar	Robo Kids	GHSS City No.1
		Khwarizmi Science Society	GHSS City No.1
		Sabaq.pk	GHSS City No.1
		Pakistan Innovation Foundation	GHSS City No.2 , GGHS Lady Griffith
		Numaish Karachi	GGHS Lady Griffith
5	Charsadda	Numerica	GGHS Garri Hameed Gul (Near Press Club)
6	Mardan	Numaish Karachi	GHSS No.4, Govt Girls Centennial model school
		Numerica	GHSS Baghdada, GGHS School Toru, GGHS Mayar
		Robo Minors	GHS Labour Colony, Govt Girls Centennial model school
		Robo Tech	GHSS No.4-Mardan
7	Nowshera	Sabaq.pk	GGHS-Pabbi, GHS-Pabbi
8	Swabi	Robo Tech	GHSS Mansabdar
9	Malakand	Pakistan Science Club	GHS - Thana, GHS College Colony
		LearnOBots	GHS No.2 -Batkhela, GHS No 1-Thana,
10	Swat	LearnOBots	GCMS Wadodia, Khpal Kor Model School
		Knowledge Platform	GHS Shagai
		Pakistan Science Club	GHS Bahrain
11	Lower Dir	LearnOBots	GHSS – Chakdarra
12	Shangla	Knowledge Platform	GHSS Karora
13	Haripur	Sabaq.pk	GHS Aloomi
		Robo Kids	GHS No.1, GHS Khalabat
14	Abbotabad	Robotics Lab	GGHS Jhangi, GHS Kokal Barseen
		Sabaq.pk	GPS Qalandarabad
		Robo Kids	GGHS No.1, GHS No.3
		Wonder Tree	Sir Syed Ahmed Shaheed Special Education School, Rise School for Inclusive Education, Kingston School for Inclusive Education, GGPS Kareempura
15	Mansehra	Wonder Tree	Special Education School Ghazi Kot Township
		Sabaq.pk	GPS Ghazikot-Mansehra
		Robo Kids	GHS No.1
16	Buner	LearnOBots	GHS Tor Warsak, GCMS Daggar



Annexure II: list of organisations

S.NO	Organisation	Location
1	Pakistan Science Club	Karachi
2	Numaish Karachi	Karachi
3	Robotics Lab	Karachi
4	Robo Tech	Karachi
5	WonderTree	Karachi
6	Sabaq	Karachi
7	Khwarizmi Science Society	Lahore
8	Robo Kids	Lahore
9	Knowledge Platform	Islamabad
10	Numerica	Islamabad
11	Garage Science	Islamabad
12	Robo Minors	Islamabad
13	LearnOBots	Islamabad
14	Pakistan Innovation Foundation	Islamabad
15	CECOS University / Peshawar 2.0	Peshawar
16	Dawood Foundation	Karachi

