

PROJECT REPORT – THE LAHORE SCIENCE MELA 2018

Khwarizmi Science Society (KSS) and Ali Institute of Education (AIE) organized the second Lahore Science *Mela* on 27th and 28th January, 2018 at the Ali Institute of Education, Ferozpur Road, Lahore. The *Mela* was a temporary museum where different scientists, artists and artisans came together to educate the masses, especially the young minds about the scientific phenomena of happenings in our surrounding. Moreover, astronomical and microscopic observations also took place which introduced the people of Lahore with the world unknown to the naked eye. It was an attempt to bring the non-science body of the society – especially children – closer to the world of science. The *Mela* was open for all and the visitors and the exhibitors were not charged

with any fee whatsoever for taking part in the *Mela*. The Khwarizmi Science Society partnered with a number of organizations to bring the dream of the *Mela* into reality; the partners included Ali Institute of Education, Eco Science Foundation, Artistan and Ilm Dost. The media partners were TechJuice, MIT Tech Review and SUNO FM 89.4 was the radio partner. The Khwarizmi Science Society



greatly appreciates Syed Babar Ali and Ali Institute of Education's support in bringing this event to life. It would not have been possible without Syed Babar Ali's generous sponsorship and encouragement. The staff and personnel at the AIE was immensely supportive in every field of logistics and we cannot thank them enough for being our right hand in the execution of such a celebration of science on a grand level. Mr. Abdul Majeed has been one of the major organizers of the Lahore Science *Mela* 2018 and we owe it to his efforts that we could put together such a great show.

The preparations for the second Lahore Science *Mela* started off in September, 2017. The KSS recruited a team of three science communicators, two graphic designers and one lab technician to work towards the *Mela*. The team started to work on the lists of schools, colleges, universities

and potential exhibitors which included various government and non-government organizations. Invitations were sent via e-mail and postage to different organizations and institutions in Lahore and across Pakistan. Letters and e-mails were sent to the Secretary of Education, Lahore but the response was minimal from the government officials. Around 1000 letters were sent out; 500 invitations were sent to the principals of schools, 150 letters were sent to heads of different colleges of Lahore and 150 letters were sent to the deans of universities in Lahore and around Pakistan. Moreover, the list of potential exhibitors had a total of 200 organizations and the team tried to reach out to all of them. It would be remiss not to mention Ali Institute's assistance in reaching out to these bodies, especially the schools.

The exclusive website for the event was up and working till late September. The team then started working on the development of the content for the website which included graphics,



blogs and information about registration process, the partners and the exhibitors. The event was greatly advertised on social media via one or two posts a day to create visibility among the target population. The team started receiving registrations during late October, 2017 and early November, 2017. The number of exhibitors increased to 30 till late November. Two posters were designed for the event and

Ali Institute provided a total of 1200 copies of the posters. These were then displayed in various areas of Lahore; the tactic of sending out the posters was different this time as the posters were sent directly to the volunteers who requested posters for display. Apart from the posters, our ambassador students also advertised it in their universities, colleges and schools near them. Four newspaper ads were published in renowned English and Urdu papers; the *Mela* was also advertised on digital steamers and a few billboards across the city prior to the event.

The final list of exhibitors was compiled on 5th January, 2018. There were 38 major exhibitors, 20 individual exhibitors and 15 schools on board. Moreover, six IBA Community Colleges from Sindh also joined us where they shared a common space and showcased their amazing inventions and discoveries. Two logistical letters were sent to the confirmed exhibitors a week prior to the



event giving them the details of event-day needs and logistics. There were two kinds of exhibits at the *Mela*: the major exhibitors (A) and the exhibitors sharing space with others (B). Following is the list of exhibitors who took part in Lahore Science *Mela* 2018 and their respective demonstration/exhibit:

Category A

1. Islamic Architecture – **Hast-o-Neest and Khwarizmi Science Society**
2. Decision Making in Engineering – **Usman Institute of Technology, Karachi**
3. STEM Education in Government Schools – **Tareen Education Foundation**
4. Mathematical Puzzles – **Isfahan Mathematics House, Iran**
5. Surilli.io (The Internet of Things) – **Silverback, Islamabad**
6. Robotics – **Robokids**
7. Engineering and Pakistani Women – **Women Engineers Pakistan, Karachi**
8. **Pakistan Council of Scientific and Industrial Research**
9. Unlocking the Secrets of Nature – **LUMS Biology**
10. From Laboratory to Patient – **COMSATS, Lahore**
11. Robotics – **Lahore Garrison University**
12. A Gaze into the Abyss – **IET on UET Campus, Lahore**
13. **Syednawala Girls Higher Secondary School**
14. BioDesign Lab - **CECOS University, Peshawar**
15. Panorama of Biodiversity – **GCU, Lahore**
16. **Smart Learning Institute, Rawalpindi**
17. Let's Make Waves in Science – **Aplha STEAMers**
18. **EjaadTech** – Nasir Jumani
19. Arduino Kits – **Hallroad.org**
20. The World of Medicine – **AIMC, Lahore**
21. **Pakistan Science Club**
22. Health and Engineering – **Ijlal Haider, University of Lahore**
23. Use of Information Technology in Irrigation – **Centre for Water Informatics and Technology, LUMS**
24. **Maktab**
25. **Makeistan**
26. Our Skies – **The Planetary Society**
27. Telescopic Observations – **Lahore Astronomical Society**
28. Artificial Intelligence – **JF Labs, Lahore**
29. Solar Energy – **Khushal Khan Khattak University, Karak**



30. Humans at Ease with Energy – Vocational Training Centre, Khairpur
31. DIY Education – LearnObots
32. Digital Books – Punjab Information Technology Board
33. Wonders of Physics – Forman Christian College, Lahore
34. The Human Body – The Dawood Foundation, Karachi
35. DIY Geeks
36. Dabistan-e-Iqbal
37. Machines Make Life Easier – Muhammad Huzair Awan
38. Khwarizmi Science Society

Category B

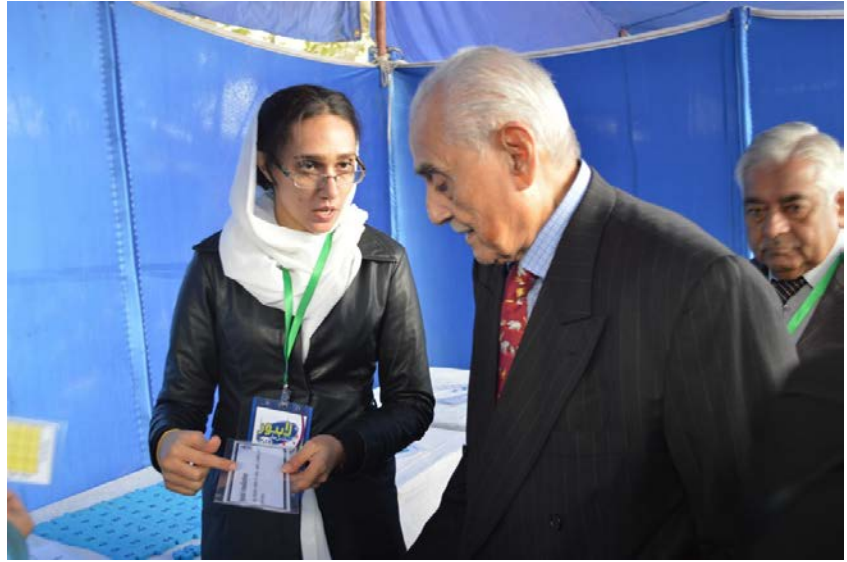
1. Colleges under IBA Sukkur
2. SECURIVE – Muhammad Rehan
3. Steam Engine – Abdul Rehman Badar and Muhammad Usman Liaqat
4. Robotic Arm – Ahmed Hassan
5. Fire Alarm – Dr. Ghazala, GCW
6. Bacterial Pathogens – Dr. Nazish, GCW
7. Stealth Computer Display – Awais Iqbal
8. Homemade Drone – Ahmad Kaleem
9. Number Printing Robot – Ahsan Kaleem
10. DNA Extraction – Moiz Mudassar Khokhar
11. Water Distillation Plant – Muhammad Asim
12. STEM Visions – Ohad Mehmood
13. Ankabut (Quadruped Spider) – Muhammad Asad
14. Spin Coater – Bilal Tahir
15. Scientific and Environment Review Magazine – Muhammad Ahsan Riaz
16. Taste Chemistry Experiments – Elsa Faisal Khokhar
17. Experience Robotics – PWM Technologies
18. DIY STEM Kits – Abdul Rauf

Schools at the Lahore Science Mela 2018

1. Mansoor Model Girls High School
2. Learning Alliance International
3. Beaconhouse, Liberty Campus
4. Sharif Education Complex

5. Divisional Public School, Model Town
6. The Trust School
7. DHA Senior School for Boys
8. Beaconhouse Allama Iqbal Town
9. The Lahore Alma
10. NCAS Academy
11. Garrison Academy for Girls
12. Pak Turk International School, Block G, Defence Road
13. Unique College – Lower Mall Campus
14. Chand Bagh School, Sheikhpura
15. Government High School, E Block, Sabzazar

The highlight of the *Mela* was the participation of Isfahan Mathematics House (IMH), Iran. A delegate of two mathematicians visited Pakistan to take part in the Lahore Science *Mela*; they brought mathematical puzzles along for the children. It was an important exhibit because it is necessary for educationists to change the way mathematics is taught. It is considered to be a tough



and dry subject and the students are usually scared of mathematics. It was a wonderful step towards making maths fun and we hope to continue these activities in Lahore and other areas of Pakistan in the future.

The *Mela* started off with the recitation from the Holy Quran followed by a welcome speech by Dr. Saadat Anwar Siddiqi. Syed Babar Ali, the chief guest, then shared his views about the dream behind the Lahore Science Mela 2018 and the efforts made to make it a success. The representative of IMH from Iran, Sharareh Dastjerdi also shared her experience in Pakistan with the visitors. Our passionate volunteers helped us a great deal before and during the event. They assisted us with social media marketing to create greater visibility, some sent their personally written articles for the blog, some helped us with the event day logistics, some acted as our

ambassadors in their respective universities, some guided the visitors and some represented the Khwarizmi Science Society as our demonstrators at our exhibit. We received excellent response and cooperation from the exhibitors and the visitors. It was recorded that more than 15,000 people visited the *Mela* on both days. The exhibition remained open from 10 am to 5 pm on both days with a lunch break from 1 pm to 2 pm; ten food stalls were established in the smaller ground at the Ali Institute of Education where the visitors enjoyed palatable local and exotic foods.

The eventful exhibition concluded on 28th January, 2018 at 4 pm with a speech by Dr. Sabieh Anwar, the general secretary of the KSS. Dr. Saadat Anwar Siddiqi also shared his wonderful experience as a part of the Team Lahore Science Mela. Syed Babar Ali talked about how the mutual efforts of AIE and KSS have made the *Mela* a success and that we should continue the outreach by organizing more and more engaging science fests. Some of the exhibitors also volunteered to share their feelings about the *Mela*; we received very positive feedback from the visitors as well as the participants. The feedback and the extensive coverage by the media is a sign of how positively the people of Pakistan are embracing the idea of Science *Melas* as a tool of revolutionizing the world of education.





APPENDIX I – LSM 2018 IN THE NEWS

On December 21st, 2017, TechJuice published the following article on their website announcing the Lahore Science Mela 2018:

TECHJUICE

Upcoming Lahore Science Mela is all about blending science and culture

“Barely a year has passed since we last saw Lahore Science Mela taking off, and Khwarizmi Science Society, the organizers behind this event, are here yet again with its second event.

The Lahore Science Mela is an annual series of science fests organized by the Khwarizmi Science Society, a not for profit organization based out of Lahore. The open-for-all event tries to amalgamate science with arts and culture and different science and arts-related exhibits will be put on display. The second Lahore Science Mela is scheduled to be held at the Ali Institute of Education on 27th and 28th of January, 2018.

This year the event will be showcasing exhibits ranging from robotic kits, innovative gadgets to models explaining how a human body works. As already mentioned, there will be different arts, cultural and photography related exhibits as well. Truly in line with the Lahore culture and its wide array of food offering, there will be dedicated stalls for exotic and desi foods to give a more Mela-like air to the event.

Although science has incorporated well into our daily lives, it hasn't yet been able to make a place in our society. In Pakistan too, kids and the other youth look up to science as a boring educational discipline while it is much more than that. Science Mela aims at defying that by conjoining Science with arts and culture, making it more practical and bringing it closer to daily life.

The last Lahore Science Mela happened early this year in January. Various government and non-government organizations such as WWF, TEVTA, PCSIR, Pakistan Science Club, The Planetary Society and the Lahore Astronomical Society collaborated to be a part of the Lahore Science Mela 2017 and exhibitors from as far as Swabi and Sukkur showcased their products. There were around 40 exhibits in total and as much as ten thousand people turned out to visit these.

Khwarizmi Science Society

Developing a culture of science



خوارزمی سائنس سوسائٹی

پاکستانی معاشرے میں فروغ سائنس کی علمی اور عملی تحریک

The registrations for this year have already begun and the organizers say that they are expecting even greater output this year. As much as 40-50 exhibits will be displayed by different science clubs and there will be ample representations from different schools and colleges. If you want to register yourself as an exhibitor, fill out this form.

This year, the event will also be hosting some prominent organizations such as the globally renowned Isfahan Mathematics House, Pakistan Science Club, Lahore Astronomical Society, Makistan, EjaadTech and Ali Institute of Education. The Water Informatics Department, Physics Department and Biology Department of LUMS is also partnering up with the organizers.

Founded in 1997, the Khwarizmi Science Society (KSS) is working as a not for profit organization that is working to incorporate the science culture into Pakistan's educational and in general social scenarios."

On December 22nd, 2017, the following article was published on Technology Times:



Lahore Science Mela 2018 aims to combine science and culture

"Khwarizmi Science Society, a not for profit organization based out of Lahore use to organized Lahore Science Mela, that is an annual series of science fests. This open event tries to combine science with arts and culture. Different science and art exhibits were on display in the event.

The event will showcase exhibits from robotic kits, innovative gadgets to models explain the working of the human body. Exhibits related to arts, cultural and photography will also be displayed. Lahore's culture and its wide range of food offering will be highlighted by dedicated stalls for desi foods.

Although science has been merged into our daily lives, unfortunately in our society, it has not made any place yet. Science Mela aims that by skirting Science with arts and culture making it practical and closer to daily life.

In last Lahore Science Mela various government and non-government organizations such as WWF, TEVTA, PCSIR, Pakistan Science Club, The Planetary Society, and the Lahore Astronomical Society team up to be a part of the Lahore Science Mela 2017. Exhibitors from



Swabi and Sukkur displayed their products. There were around 40 exhibits in total. Around 10 thousand people attended the event.

The organizers are expecting the greater audience this year. The registration for this year has begun. Different science clubs will showcase around 40-50 exhibits and numerous representations from different schools and colleges.

Some prominent organization will also be hosted this year such as the globally renowned Isfahan Mathematics House, Pakistan Science Club, Lahore Astronomical Society, Makistan, EjaadTech and Ali Institute of Education. The partners of the event are Water Informatics Department, Physics Department, and Biology Department of LUMS.

Khwarizmi Science Society (KSS), a not for profit organization, founded in 1997, is working to incorporate the science culture into Pakistan's educational and in general social scenarios."

On January 22nd, 2018, the following article about the Lahore Science Mela 2018 was published by The Nation:

The **Nation**

Lahore Science Mela to begin on 27th

"The two-day Lahore Science Mela 2018 will begin at the Ali Institute of Education on January 27.

The event will feature a temporary science museum showing lively exhibits of science , art and culture. The event is being arranged by Khwarizmi Science Society (KSS). KSS is a non-profit association aimed at furthering the science culture in Pakistan's educational institutions and in the general public.

In the science festival, participation from in and around the country is ensured by the organizers. There will be sessions on interaction among scientists, educators, doctors, engineers and public in the cultural hub of Pakistan.

The Lahore Science Mela will be exhibiting young exhibitors. They will excellently and confidently demonstrate their science projects and inventions, and educate others about the importance of analysing the scientific phenomena.



The Science Mela is open to all. This is the second edition of Lahore Science Mela that will bring home oft-forgotten reality that science is neither mere books nor dry facts, but a living entity that is capable of mesmerizing and leaving people spellbound.

Dr Hamid Zaman, a professor at Boston University, in his video upload on the Lahore Science Mela Facebook page welcomed visitors to the event. He said he was hopeful that festival would play a role in rejuvenating the spirit of inquiry and passion for discovery and invention among people.

The Khwarizmi Science Society, in partnership with the ECO Science Foundation, will also host delegates from Isfahan Mathematics House at the Lahore Science Mela 2018.

The Khwarizmi Science Society organizer said that a team coming from Iran will not only inspire young scientists, but also enlighten science students about theoretical and practical aspects of mathematics. As mathematics is considered to be a dry subject, it is one of the most important sciences and if taught well many children can be attracted to it.

Like technology and astronomy, mathematics is also the future of the coming generations.

It is pertinent to mention here that the University of Engineering and Technology will be showing an array of projects developed by engineering students, including autonomous wireless quadcopter, LED cube, self-balancing robots and robotic claw, at the event.”

On January 23rd, 2018, a wonderful Urdu article was published on Ary News Urdu:



لاہور میں سچے گاسائنس ملہ 2018



“لاہور: رواں ہفتے کے اختتام پر پاکستان کی ثقافتی دار الحکومت لاہور میں 2018ء کا انعقاد کا پورا ہے 27 اور 28 جنوری کو سجنے والے اس ملے جلے مختلف تعلیم اداروں کے طلبہ و طالبات حصہ لیں گے۔

تفصیلات کے مطابق خوارزمی سائنس سوسائٹی کی جانب سے منعقد کردہ سائنس ملہ 2018 آئندہ سال ماہ جنوری کی 27 اور 28 تاریخ کو ایک نجی تعلیم ادارے میں منعقد ہوگا جہاں مختلف تعلیمی اداروں سے تعلق رکھنے والے طلبہ و طالبات اس میں شرکت کریں گے اس سلسلے میں لاہور کی کئی شاہراہیں اس ملے جلے کے اشتہارات سے سج چکی ہیں۔

گزشتہ سال اس سلسلے کا پہلا سائنس ملہ منعقد کایا گیا تھا جس میں شرکت کرنے والے طلبہ و طالبات نے طب ’ کاس ’ طبعبت اور فلکات سے متعلق سائنسی پراجیکٹس بنا کر ملے جلے میں شرکت کرنے والوں کو ورطہ حرمت میں داخل دیا تھا۔

ملے لکے منتظر کا کہنا ہے کہ یہ ایونٹ ہمارے ابھرتے ہوئے سائنس دانوں کو اپنی ایجادات کو منظر عام پر لانے کا موقع دے گا۔ انسان چاہے عمر کے کسی بھی حصے میں ہو، اس کے اندر کا تجسس نہیں مررتا۔ بالکل اسی جذبے کو بانٹنے کے لیے ہم ہر طبقے اور ہر عمر کے لوگوں کو اس ملے میں شامل ہونے کی دعوت دیتے ہیں۔

یاد رہے کہ خوارزمی سائنس سوسائٹی ایک فلاحی ادارہ ہے جو ملک میں سائنس کے نظریاتی علوم کے ساتھ ساتھ عملی سائنس کو بھی فروغ دے رہا ہے۔ اس سوسائٹی کا مقصد عوام اور خواص میں سائنس کا شعور اجاگر کرنا ہے۔

لاہور میں یہ اپنی نوعیتی کا دوسرا سائنس ملہ ہے اس سے قبل خوارزمی سائنس سوسائٹی خیر پختواہ اور وسطی پنجاب میں کئی نوعیت کے کئی کامیاب ملوں کا انعقاد کر چکی ہے۔



ادارے کے سربراہ ڈاکٹر صبح eجو کہ آکسفورڈ یونیورسٹی سے طبعاlet مس oپی ایچ ڈی کی ڈگری کے حامل ہا' ان کا ماننا ہے کہ سائنسی ایجادات معاشرے کی ترقی میں اہم کردار ادا کرتے ہیں اور خوارزمی سائنس سوسائٹی عمی 8 سائنس کی تشہری کے ذریعے معاشرے کو مزید بہتر بنانے میں اپنا کردار ادا کر رہی ہے۔"

On January 28th, 2018, The Nation published a news article about the event-day activities:

The Nation

Government Shows No Interest in Science Fair

“LAHORE - The two-day Lahore Science Mela began Saturday organised by Khwarizmi Science Society at Ali Institute of Education. More than 50 stalls were set up. A book fair was also organized for schoolchildren.

Trust School, Garrison Boys High School, Sayedawala Girls High School of Kasur, Institute of Business Administration, Community College Shukker, University of Engineering and Technology, Forman Christian College University and Government College University set up their stalls. Except Pakistan Council of Scientific and Industrial (PCSIR), no other government school or department showed interest in taking part in the important science fair .

Sharareh Dastjerdi, hails from Isfahan Iran, who set up stall of Khana-e-Riazi Isfahan (Isfahan Mathematics House), told The Nation that coming to Lahore was a tremendous experience and this science fair provided opportunity to interact with upcoming scientists of Pakistan.

“Our house teaches mathematics to elementary schoolchildren, teachers, and blind people. We teach them how they can relate mathematics to their life,” she said.

The science fair provided opportunity for students of smaller town to exhibit their scientific ideas. Laraib Ali, Riffat Haneef, Tehmina Khaliq and Hira Maryam student of Amina Girls Higher Secondary School Gelywal, district Lodhrah set up their stall at science fair . The school is being operated under Tareen Education Foundation.



Riffat explained that they have made a wifi enabled 'Fruit Cart' to pick and load the fruits and vegetables in gardens and farms. "This can be useful for farmers and could be time effete. If government supports us then we could develop this on larger scale.

They also made solar panel which could be used to automate for watering the fields. Riffat said this can revolutionize the agriculture sector of Punjab.

Hafsa Faryal Khan Kiyani, a National College of Arts miniature graduate, exhibited displayed her Persian and Indian miniature artworks at Hast-o-Neest stall. "I have tried to depict the living style of Persian and Indian rulers in my art," Hafsa said.

Gazzanfar Aziz, 14, student of IBA Sukkar Community College displayed a project on environment pollution. Waseem Saddiqui, an IBA Lecturer said this science fair has provided students from Sukkur and Dadu to portray their scientific ideas and opportunity to interact with other people learning scientific knowledge.

Organizer of Lahore Science Mela Dr Sabieh Anwar said science museum showing lively exhibits of science , art and culture and on first day people participation from in and around the country. "The festivals demonstrate to aware students that science not just a dry facts subject.

President of Pakistan Science Club Abdul Rauf said science fair is an opportunity to answer the queries of students and to motivate them perusing their passion in science.

Umair Asim, founder of Lahore Astronomical Society and Zeds Astronomical Observatory commented that this year the people response is very impressive. "Pakistan has vast opportunity in the field of astronomy and we are creating awareness among children," he said. The science fair will conclude today."

By Faizan Ali Warraich

The Academia Magazine published the highlights of the Mela on 30th January, 2018:



Lahore Science Mela 2018: Inspiring the next generation of builders



“Studies related to scientific subjects traditionally make young students a bit apprehensive because of a general perception that the concepts are either too difficult or too boring to fully understand.

But both parents and children often do not realize that science of nature and things around us is a world full of awe and wonder, exposure to which can lead to young minds on paths of marvelous discoveries. But studies of science in Pakistan have traditionally been pursued in the realm of medicine, as it is a profession considered both highly esteemed and rewarding for professionals associated with it. In most cases, if a student does not make it to medical school, he or she is often encouraged not to pursue a profession in science further.

However, science is much more than study of medicine, and its applications are increasingly becoming evident in even the smallest of everyday chores. But the amazement of science cannot be understood by children without a due exposure to its possibilities, which is why the 2nd Lahore Science Mela 2018 was as significant an event for our youth as any.

The two-day event was organised at Ali Institute of Education by Khwarizmi Science Society, a non-profit entity working towards the popularisation of science among students and the general public of Pakistan since 1997.

The science mela, held on January 27 and 28, was an open-for-all event that invited the people of Lahore to explore the scientific discoveries and milestones in Pakistan. There were around 70 exhibits from government-based and non-government organisations and the entire venue was set up as a temporary museum.

Several organisations participated in the event, including Pakistan Science Club, PCSIR, JF Labs, Makeistan, Robokids, EjaadTech, Lahore Astronomical Society, The Planetary Society, Allama Iqbal Medical College, Government College Lahore and CECOS University Peshawar. Young scientists like Huzair Awan, Moiz Mudassar Khokhar, Elsa Khokhar and Aimen Rajput also participated in the mela and exhibited their inventions and scientific experimentation. Eleven year old Moiz Mudassar surprised visitors by exhibiting the process of extracting DNA from fruits, leaving elders in amazement and children truly in awe, and hopefully, inspired.

The event was a worthy effort to make the people realize the importance and application of science and an attempt to provide hands-on experience to children to inspire them to pursue their innate sense of curiosity in order to become innovative adults of tomorrow.”

On January 28th, 2018, Express Tribune published a post event article on the Mela:



THE EXPRESS TRIBUNE

Mela instills science DNA into students

“Children of all ages enthusiastically experienced different aspects of science in action and participated in experiments and models set up at the Lahore Science Mela.

The two-day event kicked off at the Ali Institute of Education on Saturday where 70 exhibits were set up and children from all parts of the country took part.

On the first day of the festival, more than 8,000 students, parents and science enthusiasts visited the festival.

While inaugurating the festival, Ali Institute of Education Chairman Syed Babar Ali said, “I wish and pray for our children, who take part in scientific activities. Science enthusiasm is not innate; science is observation and hard work and we are trying to bring the spirit of experimentation in our child which is the idea behind the Mela.”

Students exhibited more than 70 science models, displaying their passion for science and technology and introduced innovative concepts for visitors. Interactive displays and live experiments, some of which involved lunar and solar observatories, robotics, and 3D printing caught the imagination of young minds.

Eleven-year-old Moiz Mudassar surprised observers by extracting DNA from fruits; which was not only an element of surprise, but also a source of inspiration to other children.

Speaking to *The Express Tribune*, Dr Sabieh Anwar, one of the organisers of the festival, said that the purpose was to promote science and connect people with it. “The Mela is part of our culture and has been a social norm for centuries. Science is considered a dry subject and is bound to just books. We want to make it accessible to our children as being fun and interesting.”

On January 28th, 2018, DAWN News published the following article about the LSM 2018:



Children evince keenness to science

“LAHORE: A two-day Lahore Science Mela for children kicked off on Saturday at the Ali Institute of Education to encourage children and adults to explore and celebrate scientific discoveries in Pakistan.

The festival was organised by Khwarizmi Science Society in collaboration with the Ali Institute of Education.

Around 8,000 students from different government and private educational institutions were seen visiting the stalls of different projects.

The students exhibited more than 70 models and displayed their passion for science and technology and introduced innovative concepts to the visitors. The stalls had displayed individual and group projects including mathematical games, astronomy, biology, robotics and physics.

Iran’s Isfahan Mathematics House representatives were excited to come to Pakistan for the first time and expressed confidence in the ability of the children who were enjoying solving complex mathematical problems at their stall.

A seventh grader, Moiz Mudassar, and his sister Esha were busy in extracting DNA from fruits.

Talking to Dawn, Moiz said he wanted to be an astronaut but also attracted to biology. “I have seen a number of videos on Youtube and learnt to extract DNA from fruits.”

Another student, Abdul Rehman, said he came to know about the science mela from his teachers who asked him to visit it. “I enjoyed drone operations, Hydraulic Robot and 3D printing.”

Ali Institute Chairman Syed Babar Ali said he wanted children to take part in scientific activities. A number of scientists from different parts of Pakistan and other countries visited the event that will remain open today (Sunday).”

On January 29th, 2018, TechJuice published yet another interesting article:



TECHJUICE

5 things we absolutely loved at the Lahore Science Mela 2018

“The second Lahore Science Mela kicked off at Ali Institute of education on 27th and 28th January. The event was temporary science museum of sorts which welcomed the people of Lahore to explore the scientific discoveries and milestones in Pakistan. At this grand celebration of science, the Khwarizmi Science Society and Ali Institute of Education hosted around 70 exhibits of various government-based and private organizations.

The visitors watched with awe while little scientists demonstrated their inventions and scientific experimentation. Various organizations and educational institutes became the part of the event including Pakistan Science Club, PCSIR, AIMC, LUMS, GC, CESOS University Peshawar, Robokids, EjadTech, and Lahore Astronomical Society.

Interestingly, many shiny kids from various schools of the city and outside exhibited their models at the event. There were many fascinating models and presentations at the event, while we have come up with few of them that got our attention.

1. Laser Spirograph to present figures we can't see:

Ahsan Javed, a shining star of the event, presented a Laser Spirograph. It is a research prospect, based on the idea to present figures used in mathematics or business through a laser projector. It's made from a laser module reflected off 4 motors each with a mirror mounted to the front. With only one motor running it makes the circle design, and then as each motor is turned on at varying speeds it produces the more complex designs.

2. Augmented Reality Skeleton

Muhammad Khan from Daood Foundation presented an augmented reality skeleton, which is basically used for physiotherapy, but in the event, it was set up for children to know about their skeletal system. Those dancing skeletons of kids were amazing to glance. The sensors built in the system simulated the movement of the human body and projected them on a screen in the form of a skeleton.



3. Tesla Coil that produces electricity without wire:

The device that was invented by Nicola Tesla back in 1881 was presented at the event by a student of LUMS, Bilal Azam. It was based on the idea that if the lightning flash of the electricity present in the atmosphere can reach the earth without wires, then why not same practice can be adopted for artificial electricity. It is considered as the core idea which led scientists towards the invention of wireless communication technology these days. A Tesla coil is an electrical resonant transformer circuit designed to produce high-voltage, low-current, and high-frequency alternating-current electricity.

4. RoboKids a STEM educational company:

Danyal Tayab from NUST Islamabad presented various models of the RoboKids. Robokids is an initiative to provide STEM (Science, Technology, Engineering, and Mathematics) education services in Pakistan. The company's first venture is a Robotics center in Lahore that provides a genuine Robotics lab environment. It aims at providing children with the opportunity, tools, and guidance to help expedite their learning, especially in STEM-related fields, and gives them a platform to express their talent and creativity.

5. Extracting DNA from fruits:

The 11-year-old Moiz Mudassar surprised the visitors by extracting DNA from fruits; which was not only an element of surprise but also a source of inspiration to other children. A detergent is added to the pulp of the fruit to release the DNA from the cell membranes. The DNA is precipitated by alcohol where it becomes visible. The DNA you obtain using this procedure can be observed with a microscope and can be used for other experiments like electrophoresis or other experiments.

The event that focused on practical models was very encouraging for kids to explore their potential in science, where most of them think of it as a dry subject. TechJuice has been the media partner of the amazing Lahore Science Mela.”

By Sajeel Saeed

Another wonderful article was published on The Educationist on 29th January, 2018 by Rubab Azeem:

Khwarizmi Science Society

Developing a culture of science



خوارزمی سائنس سوسائٹی

پاکستانی معاشرے میں فروغ سائنس کی علمی اور عملی تحریک



Lahore Science Mela 2018 Concludes

“Lahore (January 28, 2018) The Second Lahore Science Mela was organized at the Ali Institute of Education on 27th and 28th January, 2018. It was an open-for-all temporary science museum of sorts which welcomed the people of Lahore to explore the scientific discoveries and milestones in Pakistan. At this grand celebration of science, the Khwarizmi Science Society and Ali Institute of Education hosted around 70 exhibits of various government-based and non-government

The inauguration of the Mela took place on 27th January in Syed Babar Ali’s presence. He said in his speech to the visitors and the teams that “I wish and pray for our children, that they take part in scientific activities. Science enthusiasm is not innate; science is observation and hard work and we are trying to bring the spirit of experimentation in our children, which is the idea behind the Mela”. Scientists from different parts of Pakistan and other countries also visited Lahore for the Mela including Sharareh Dastjerdi from Isfahan and Dr. Muhammad Hamid Zaman from Boston University.

One of the largest science exhibition of Pakistan, Lahore Science Mela 2108 is a science festival organized by the Khwarizmi science society with the collaboration of some of the Pakistan’s leading corporations and public-sector organizations along with academia, entrepreneurs and specialists in various science fields at Ali Institute of Education on 27th and 28th January, 2018. It kicked-off with a massive attendance of students, teachers, families and individuals from all the provinces of Pakistan.

Different organizations such as Pakistan Science Club, PCSIR, JF Labs, Makeistan, Robokids, EjaadTech, Lahore Astronomical Society, The Planetary Society, Allama Iqbal Medical College, Government College, Lahore and CECOS University, Peshawar were a part of the event. A team of mathematicians from Iran participated in the Mela as well. They represented the Isfahan Mathematics House. Teams of students from Sukkur represented IBA Sukkur through their scientific models. Apart from that, different schools took part in the Mela where the students were given an opportunity to showcase their scientific models and inventions. Moreover, the visitor watched with awe while little scientists such as Huzair Awan, Moiz Mudassar Khokhar, Elsa Khokhar and Aimen Rajput demonstrated their inventions and scientific experimentation.



The 11 year old Moiz Mudassar surprised the visitors by extracting DNA from fruits; which was not only an element of surprise but also a source of inspiration to other children.

Talking to The Educationist, the general secretary of Khwarizmi Science Society Dr. Sabieh Anwar said, “The main objective of Lahore Science Mela is to portray Science in an interesting way. Science is not something very far away from the human intellect. We use scientific laws and principles daily therefore, it should be associated with the general public.”

What was different about this Mela was that it was open for all and did not require the visitors to pay to be a part of it. Art, culture and photography was introduced along with scientific exhibits. The spirit of Mela was everywhere; especially at the food stalls with exotic and Desi food items. As the world is moving forward towards a more technologically sophisticated future, most of our children are drawn away from science because it is considered a boring subject. What we need to realize is that science is not merely theoretical and need not be taught dryly. Instead we need to give a hands-on experience of practical science to our children so that the scientist in them does not die with time (which has happened to most of us).

President Lahore Astronomical Society Mr. Umair Asim said that “Science is quite approachable. People get away from science due to the bad teachers of science. All you have to do is to show the children that science is very easy.”

he Mela offered this very hands-on experience that parents look for when they take their children to science fests. The exhibits ranged from microscopic observations to observing the night sky; the Lahore Science Mela had something for everyone!”

On January 28th, 2018, the following article was published in Business Recorder:



Science Festival for Children Begins

“Lahore's largest two-day science festival for children kicked off on Saturday at Ali Institute of Education, to encourage children and adults alike to explore and celebrate scientific discoveries



and milestones in Pakistan. The festival was organized by Khwarizmi Science Society in collaboration with Ali Institute of Education.

The first day of the festival attracted a massive attendance of 8000 students from several government and private schools of Lahore division. The festival hosted around 70 exhibits of various government-based and non-government organizations such as Pakistan Science Club, PCSIR, JF Labs, Makeistan, Robokids, Ejaad Tech, Lahore Astronomical Society, The Planetary Society, Allama Iqbal Medical College, Government College, Lahore and CECOS University, Peshawar.

A team of mathematicians from Iran representing the Isfahan Mathematics House also participated in the event. Representatives of Isfahan Mathematics House were excited to have come to Pakistan for the first time and expressed confidence in the ability of Pakistani children who were enjoying solving complex mathematical problems at their stall.

Students exhibited more than 70 science models displaying their passion for science and technology, and introduced innovative concepts to the visitors. Interactive displays and live experiments, some of which involved lunar and solar observatories, robotics, and 3D printing caught the imagination of young minds.

11-year-old Moiz Mudassar surprised observers by extracting DNA from fruits; which was not only an element of surprise but also a source of inspiration to other children.

Maths and science education is critical in developing the cognitive skills in children. It is also necessary to ensure that the quality of learning becomes a critical informant of how decisions of funding, recruitment, measurement, rewards and punishment are made by the public sector. Nations have used maths and science to empower their citizens with higher incomes, and to help grow their economies.”

Sciremag.com published the following post-event article on 4th February, 2018:

Promoting STEM in Pakistan

“Whilst Pakistan does face a paucity of events that stimulate the love of science, there are some outliers. One of these is the Annual Lahore Science Mela organized by the Khwarizmi Science Society from the 27th to 28th of January.

This event was orchestrated to showcase recent scientific developments in Pakistan. There was an array of live experiments and displays. Notable organizations such as Pakistan Science Club, PCSIR, Lahore Astronomical Society, The Planetary Society, Allama Iqbal Medical College, Government College Lahore and CECOS University also had stalls set up. An Iranian delegation



from the Isfahan Mathematics House had also sent a team of representatives to inspire the love of mathematics in young minds, marking the first time an international delegation participated in the event.

The team at Scire diligently covered the team with a great degree of enthusiasm. We here at Scire hold many of the same principles as what this event represented.

Although the event showcased many intriguing displays, one did catch our attention. The TISON Project, led by Doctor Safee Ullah Chaudhary and his team promises to find a personalized cure for cancer through genome mapping and virtual simulations done in a computer program. This will help find an optimal treatment solution unique to every patient.

Another very interesting display was by the National College of Arts; Professor Taimoor Khan shared his extremely intriguing views about how Islamic theology inspires art and architecture. His view really makes one contemplate on how inherently harmonious the world is.

Robotics seemed to be a recurring theme at the Mela. There was an abundance of stalls selling ready made kits for interested children to have a try at it. However, there was no shortage of some advanced robotics. Astronomy was also extremely prevalent. There was a plethora of telescopes set up for children and grown ups to try.

The Observatory stall of the Lahore Astronomical Society set up an array of different observational instruments, instilling curiosity in children to peek through the telescope lens and witness the skies above.

Truly a lively experience, Lahore Science Mela is an ideal example of initiatives taken to reignite scientific passion in Pakistani culture. Surely if acted upon, these ideas may just become a reality in the near future.”

By M. Abdullah Khurram

Ramla Qureshi from Women Engineers Pakistan shared a wonderful piece of writing about the role of Pakistani women in STEM Education in which she also commented on her experience at the Lahore Science Mela on The News on February 11, 2018:



Women in Science



“There is no lack of talent in Pakistan. Then why is there an immense gender gap in professional fields involving science, technology, engineering, mathematics and medicine (STEMM)? If your answer to this question is that the gender gap doesn’t exist as there are many women at medical colleges in Pakistan, then you’re half correct – and only painfully so.

The International Day of Women and Girls in Science is celebrated on February 11. Unfortunately, the gender parity ranking in science, technology, engineering, and mathematics (also referred to as STEM) fields for Pakistan has hit rock bottom. While it seems that there isn’t much to celebrate, we can view it as a window of opportunity. Weeding out the causes of this dearth of women in STEM fields can provide an insight into what can be changed to tip the scales.

Girls are ostensibly pushed towards dolls and plastic cooking sets from an early age while boys are gifted toy cars, building blocks, board games and toy robots that stimulate their spatial and analytical faculties well before their parents send them to school. As it happens, children are attached to their toys and are believed to gain creativity as well as social skills from the games they play. A research conducted by the Association of Psychological Science in January 2015 revealed that children who frequently play with puzzles, construction sets and board games tend to have better cognitive abilities.

No conscious effort is made to cultivate interest among girls to toys that focus on math, science, and construction activities. Their lack of interest is conveniently attributed to biological factors and shrugged off. According to an American Society for Engineering Education investigation of Amazon.com datasets, physics and engineering toys were each purchased at a rate of only about 8.5 percent for girls. There is possibly some variation in the trend of buying toys based on gender stereotypes in Pakistan. The question of ‘how much’ is currently open to speculation. What’s interesting to note here is that girls in class eight have usually outperformed boys in all subjects in Pakistan. If girls weren’t inherently inclined towards technological conquests, they would have scored poorly in educational assessments.

The question that arises is: what changes after class eight? Why do girls lose interest in fields related to engineering, technology and mathematics? In Pakistan, more girls can comfortably choose to study in a medical university because these institutes already have a significant number of female students. The representation of women as doctors and pediatricians in TV serials and commercials has ‘normalised’ the presence of a female medical practitioner at hospitals.



But there are few relatable role models for Pakistani girls within science and tech industries, especially within the engineering sector. This does not mean that exceptional Pakistani women practitioners in STEM fields don't exist. We have merely neglected their tremendous achievements. Pakistani women have become pilots, engineers and pioneers. But how many of their trailblazing triumphs have become common knowledge?

Recently, at the Lahore Science Mela, the Women Engineers Pakistan booth received considerable attention from school-going girls and their parents. Inspired by this response, Women Engineers Pakistan is now running a month-long campaign to highlight women role models to encourage future generations of engineers, technologists, and scientists.

We have received hundreds of emails from young girls about which engineering field is the most "suitable for girls". Upon further inquiry, we often find that their elders are not sure if the chosen field will be safe for a woman to navigate. It is difficult to blame them as many of us would be just as concerned knowing what we do about workplace harassment within the tech sector. We must not forget that there are some inspirational female engineers who work on site. The only difference is that their organisations actually make direct efforts to foster a welcoming work environment for them. Organisations that take an active stand to making their workplaces safer and are more accommodating have been seen to retain more women in STEM fields.

While sexual harassment laws are already in place in Pakistan, we still need to cover a lot of ground. These distressing events come in all shapes and sizes. For example, a male professor recently told me that female faculty members are seldom hired for the engineering department because they cannot stay back late and conduct outdoor sessions. Such convenient generalisations by experts reflect the implicit or unexamined biases against women.

Equal pay based on gender is not mandated by the government of Pakistan, or any law within the country. But from a bird's eye view, Pakistan is moving towards gender parity – albeit at an extremely slow rate. There are many efforts being made to highlight the gender gap and organisations are taking fresh strides to recruit and retain more skilled women.

One thing that has repeatedly surfaced is the concept of diversity. Diversity includes the many different social identities that give meaning to us and the social groups that we belong to. It reflects a headcount of who is at the table. Unfortunately in Pakistan, including a woman speaker in the panel of a tech conference or having six female employees in a company of 10,000 workers is considered to be sufficient in creating a diverse atmosphere.



What we need to focus on is the concept of inclusion. Inclusion deals with questions about the ‘how’. How is an STEM organisation embracing the diversity that it has? Are the female employees provided female toilets? Is there a daycare system available for working mothers? Are female bosses attentively listened to just as much as the male ones? Are female employees of the same rank being paid a salary that is at par with their male counterparts? It is often said that “without inclusion, there’s a diversity backlash”. Most women opt out of these male-dominated fields because they are marginalised.

Women constitute more than 48 percent of the population. Of these, only 44.3 percent are literate. As per the Pakistan Council for Science and Technology, less than 10 percent of engineers and technologists are women. For other STEM fields, women constitute around 18 percent of manpower.

It is unfortunate that exact data doesn’t exist for this disparity. But rhetoric and facts alone can’t change the status quo. A great deal needs to be done to encourage more girls in science and math-related fields. This gap needs to be seen as an opportunity for the entire country to move forward. The time to act is now.”

With ECOSF’s support and help, KSS was able to attract an exhibit from abroad and it was a whole new level of science outreach in Pakistan where science propagators from another country visited Pakistan merely to educate the common people about the importance of mathematics. Here is a detailed report on the Lahore Science Mela by ECOSF:



ECOSF
ECO SCIENCE FOUNDATION

ECOSF brings Iranian Mathematicians in the 2nd Annual Two-Day “Lahore Science Mela” at Lahore-Pakistan, January 27-28, 2018

“A two-day Lahore Science Mela (Festival) organized by the Khwarizmi Science Society in collaboration with the Ali Institute of Education, ECO Science Foundation (ECOSF) and with the support of the great Philanthropist Syed Babar Ali was held in Lahore on January 27-28, 2018. Thousands of students, science enthusiasts and scientists participated in the Lahore



Science Mela (Science Fair). It was attended by students from government and private educational institutions, over 70 exhibits including science models made by students were showcased during the festival. The Science Mela aimed to encourage children and adults to explore and celebrate scientific discoveries and milestones in Pakistan.

President ECOSF Prof. Dr. Manzoor H. Soomro participated in the Science Mela, where he visited various exhibits and interacted with science enthusiasts and participating teams from all across the country. It is pertinent to mention here that the Science Mela is a brain child of Dr. Sabieh Anwar of Lahore University of Management Sciences (LUMS) and Dr. M. Hamid Zaman from Boston USA, welcomed by Dr. Saadat Anwar Siddiqi the President of Khwarizmi Science Society Lahore, all of whom also participated in the event. During the Mela President ECOSF Prof. Dr. Manzoor H. Soomro also interacted with Syed Babar Ali and other science enthusiasts.

It is important to mention here that ECOSF sponsored participation of two Mathematicians from Isfahan Mathematics House, Iran who displayed interactive Maths games and puzzles that children enjoyed and learnt the principles of Mathematics as a fun activity. It is hoped this first interaction of Iranian colleagues will lead to collaboration in the area. The visiting mathematicians from Iran will not only inspire young scientists, but also enlighten science students about theoretical and practical aspects of mathematics. As mathematics is considered to be a dry subject, it is one of the most important sciences and if taught well many children can be attracted to it. It is important to mention here that Lahore is a sister city of Isfahan in Iran. Isfahan is called as “Nisf Jahan” meaning half of the world.

During the event, students and participating teams representing a number of universities of Pakistan displayed an array of projects developed by engineering students, including autonomous wireless quadcopter, LED cube, self-balancing robots and robotic claw, at the event. Organisations such as Pakistan Science Club, PCSIR, Lahore Astronomical Society, The Planetary Society, Allama Iqbal Medical College, Government College Lahore and CECOS University, Peshawar also took part in the festival.”

In the 9th Volume, Issue 04 of the Technology Times, Lahore Science Mela 2018 was covered in a tremendous way:



Lahore Science Mela 2018: Interaction of Science and Culture

“A Two-day long activity “Lahore Science Mela” was organized by Khwarizmi Science Society (KSS) at Ali Institute of Education with the support of prominent Philanthropist Syed Babar Ali. Fifty plus stalls, book fairs, displays were set up for the children. This event was a provisional science museum which welcomed the people of Lahore to explore the scientific discoveries and milestones in Pakistan.

A large number of organizations along with educational institutes became the part of the event including Technology Times, Pakistan Science Foundation (PSF), ECO Science Foundation (ECOSF), Pakistan Council for Scientific and Industrial Research, Lahore University of Management Sciences, GC University, CESOS University Peshawar, Institute of Business Administration, Community College Shukkur, University of Engineering and Technology, Pakistan Science Club, Robokids, EjadTech, Lahore Astronomical Society, and many more.

Technology Times in collaboration with PSF and Pakistan Academy of Sciences introduced a unique feature in Science Mela by displaying a 100 feet long banner having pictures of eminent Pakistani scientists and engineers who were decorated by Government of Pakistan for their achievement in their respective fields. It is a great opportunity for children as well as all other participants to know about real legends of Pakistan. A large number of students and citizens appreciated the Banner, and click photos with their favorite personalities pictures.

“The Lahore Science Mela” (LSM) 2018 is a science fest; showcased inventions, discoveries, experiments, science models and artifacts received from all parts of Pakistan. It is an opportunity to engage all citizens, especially the children in celebrating science. Our focus is on the wonder aspects of practical science accomplished through practical activities such as handson games and experiments that will appeal to our young boys and girls”, said by Dr. Saadat Anwar Siddiqi the President KSS.

There is a session on interaction among scientists, educators, doctors, engineers and public in the Lahore, the cultural hub of Pakistan. This year, ECOSF brought two Mathematics experts from Isfahan Iran to display interactive maths games and puzzles that children enjoyed and learned principles of Mathematics with fun.

Dr. Manzoor Hussain Soomro, President ECOSF told that “team from Iran not only inspired young scientists, but also instructed science students about theoretical and practical aspects of mathematics. As mathematics is considered to be a dry subject but it is one of the most important science and if it taught interestingly many children can be attracted to it”.

Dr Sabieh Anwar, brain behind the LSM said, “the science museum here at LSM showing lively exhibits of science, art and culture. The festivals demonstrate to aware students that science is not just a dry facts subject”.

The science fair provided opportunity for students of smaller town to exhibit their scientific ideas. They excellently and confidently displayed their science projects and inventions, and also instruct others about the importance of evaluating the scientific phenomena.



Participated school's children have made number of interesting projects like WiFi enabled "Fruit Cart" to pick and load the fruits and vegetables in gardens and farms, solar panel which could be used to automate for watering the fields.

Dr Sharareh Dastjerdi, from Isfahan Iran, who also set up stall of Khana-e-Riazi Isfahan (Isfahan Mathematics House), told that coming to Lahore was a tremendous experience and this science fair provided opportunity to interact with upcoming scientists of Pakistan.

Commenting on the Banner, the President KSS, Dr Saadat Anwar Siddiqi said, "our people especially young generation is not familiar with the real heroes of Pakistan – the scientists, the engineers, who dedicated their lives for Pakistan. This Banner introduced our scientists and engineers briefly. Through this people will know about their contribution which will encourage them to follow. Moreover, this Banner also introduced different fields of science and technology to our young scientists, this will help them to choose their area of study in future".

The purpose behind arranging Mela is not to teach but to have fun, through hands-on activities, workshops, fascinating science experiments and demonstration of technological tools that are aimed at all age groups, thus fueling visitors' innate curiosity towards science. KSS is aimed at promoting the science culture in Pakistan's educational institutions and in general public."

By Hina Baloch



APPENDIX II - FACEBOOK REVIEWS

By Rizwan Ahmad Rana:

“This activity will In Shaa Allah introduce the new generation to science and will motivate the young generation. This is long awaited and visionary step. It would have been initiated long time ago.”

By Nasir Jumani:

“One of the best events I have attended so far. Kudos to KSS for pulling it all together.”

By Nadia Akram:

“Hats off to the whole team as they arranged such a successful event. I was really amazed by your efforts on such a huge level. Special regards to Dr Saadat, Dr Sabieh, Charisma and Hamza in fact to whole KSS and all media coordinators. May Allah make all your efforts prosperous in promotion of science especially to under privileged children and may our nation and Pakistan prosper. Aameen. My son missed an annual international debating competition for this event but it worth it. They learned about astronomical society, events occurring in Arfa Tower for kids and fun electronics classes held in Lahore. It was such an educational and informational fun event specially under privileged children got too much exposure alhmdulillah.”



EVENT-DAY FEEDBACK

We received more than fifty feedback forms on the event-days; the LSM 2018 was very positively received by the public. What was more interesting than the diverse turnover of the visitors was that their feedback was equally diverse and rather intriguing. The feedback form comprised of eight questions about the event and the audience's views about it.

While answering the first question which inquired the visitors about the source of news of the *Mela*, they mentioned many channels including social media (Facebook, Twitter), the KSS's website, WhatsApp, through posters displayed in public places, through friends at schools, colleges and universities, invitation letters sent to them prior to the *Mela* and outdoor advertising tools such as billboards. It showed how every advertising tool used to attract the visitors turned out to be useful.

The second question asked the visitors about their views on how the *Mela* might have affected the young minds, especially the students. Some mentioned how science outreach is eradicating the gaps between different socio-economic classes, some were hopeful that such events will eventually rid the students of the stereotypes about how science and mathematics are hard subjects and are only meant to be studied by the geniuses and that science is for all, no matter what the age group, gender or class they belong to. Some mentioned that it will finally help students overcome the humongous hurdle of memorization and gaining good percentage/grade and that they will prioritize learning over grades.

Upon asking about which aspect of the *Mela* attracted their attention the most, as expected, their views were diverse. Some visitors shared that they really appreciated the way young exhibitors were explaining the science behind their projects; it showed that they had a better understanding of scientific phenomena happening around us. Most of the visitors liked the mathematic games and puzzles introduced for the first time in the **Lahore Science Mela Series**. Some thought that the medical specimens and taxidermies of animals were the most fascinating.

When asked about their views on how people received the idea of the Science *Mela*, some visitors commented that it was greatly appreciated merely because it does not happen that often that an event is arranged exclusively for science outreach. Some people suggested that the *Mela* should be held at least twice a year so that the people who somehow missed the event, get another chance to be a part of it.

The fifth question inquired them about the nature of science and whether a serious subject such as science should be taught in the form of fun games and exciting puzzles or not. Some visitors emphasized on the fact that making science fun is the only way to bring common people closer to science as not everyone is willing to work in the lab to explore the secrets of science. Some argued that a game can also be a form of education, rather a better form of education than the classical tools that have been used in educational institutions so far. A few visitors also mentioned that making science a part of our daily lives can merge practical aspects of science with a child's early childhood development and that the event was a great platform for the parents to explore such possibilities.



When asked about the implied importance of such events in Pakistan, some visitors discussed that it is important to keep entertainment and intellectual thinking in balance and the *Mela* was one of those happenings which provided such a balance. An interesting response form suggested that it is a way to induce “real interest” in science in which a child actually explores the world rather than reading about it. A few mentioned that such events can be sources of encouragement and motivation for the young scientists and should take place more often.

We realize that we could not bring every citizen of Pakistan to this celebration of science and we asked for suggestions to fill these gaps between the scientists and the common man. People suggested that this gap can only be filled by organizing more and more science outreach events and gatherings. Some argued that the less privileged members of the society are still out of our range and we should initiate door-to-door outreach to create more and more awareness.

Government plays a vital role in a country’s education system; when we asked our visitors about their message to the government bodies about improvements in the education system and science communication, they said that the government should fund such activities so that science is reachable to the lower classes of the society. Some suggested that the government should endorse, if not fully support, these events and take part in improving the quality of teaching science and learning in general.

We also received some very interesting suggestions for the next Lahore Science *Mela*; we were told that the *Mela* lacked the element of healthy competition and that competitions should be held to keep the children’s spirits up. It was also suggested that the *Mela* should take place in different regions of Pakistan, especially the villages where the students do not have the resources to explore and experiment.

The Khwarizmi Science Society is thankful to every little force that drove us closer to this tremendous celebration of science and art. We are grateful to our exhibitors who took out time merely to take part in the Lahore Science *Mela* 2018. We appreciate how some of our exhibitors traveled for days just to reach Lahore on time. We thank the staff of Ali Institute of Education again as the *Mela* would not have been possible without their assistance. We appreciate every little effort put in by the volunteers; indeed, their collective efforts made it quite easier for the team to put together a successful event. In the end, we are humbled by how great the turnover was and how wonderfully the people of Lahore received the idea behind the Lahore Science *Mela* Series.

Charisma Wafee
Science Communicator
Khwarizmi Science Society