



December 2023 - January 2024
Bi-Monthly Report

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Government of Pakistan

Table of Contents

Executive Summary	2
Project update	4
Learning	4
STEAM Safeer	15
Policy Deliverables	16
Sindh	16
Gilgit-Baltistan	16
Punjab	17
Federal	17
Partnerships	19
University Partnerships	19
Corporate Partnerships	21
Partnerships with NPOs	22
Communications	23
Strategies and branding	23
Social media	23
Program Management	26
Head teacher engagement	26
Monitoring and evaluation	26
Stocktake meetings	26
Bi-monthly reporting regime	27
Challenges and Mitigation Strategies	28

Executive Summary

STEAM Pakistan is a multi-strand project aimed to improve STEAM education through a phased approach. Its expected outcome is to improve STEAM learning for 5 million students, build the professional capacity of 100,000 teachers and revamp 13,000 high schools all across Pakistan in the next 5 years.

Major milestones achieved during the months December 2023 and January 2024 include:

- 4,224 STEAM partner schools have signed up for the program as of 31st January with 2,287 school signups from Punjab, registering in the last two months only.
- 1,283 students from 28 schools in Sindh, Punjab, and Islamabad Capital Territory were engaged through various STEAM Pakistan corporate and university partners in the form of Safer sessions, math circles, and STEAM Safari trips.
- In-person and virtual orientation sessions were held for Punjab and Sindh schools
 - 819 teachers and head teachers from 448 schools participated in sessions scheduled for Punjab schools from 5th December to 4th January. Sessions from 11th - 29th January saw participation from 3000+ representatives invited from 2,406 schools.
 - In Sindh, 307 head teachers and/or focal person from 233 schools were oriented regarding the STEAM program. Additionally, 6 virtual activity-specific refresher sessions were held with 300+ teachers attending.
- The Islamabad FDE STEAM Competition school and area rounds were executed with participation by 2,280 students from 76 schools across 6 sectors of Islamabad. The Sindh SE&LD STEAM Muqabulo school round was also held in schools with participation from 12,082 students from 200 schools in January 2024. The final rounds for the Sindh Muqabulo and Islamabad competition are scheduled for February and April respectively.
- The Gilgit Policy Unit was engaged in the development and finalization of marking schemes for annual examinations, reviewing assessments from the snowbound regions, and served on the rechecking committee post examinations.
- Pakistan Cables sponsored STEAM Pakistan's third and fourth STEAM Safari visits, highly motivational and encouraging field trips to TDF MagnifiScience Center in Karachi for 120 girls from GGSS Neelam Colony, Karachi South and GGSS No. 4 Korangi, Karachi's most active schools in October and November

- 3 Mathematics workshops were conducted in collaboration with LUMS, Habib University Karachi and IBA Sukkur for students and teachers, inculcating a passion and curiosity for math in participants.
- A trip to the Indus Valley School of Art and Architecture's Degree Show 2023 was sponsored by the Engro Foundation for Karachi's best performing school in Lyari, GGSS Haji Wali Yaqoob in December. 60 students from grade 6 and 7 were given a tour of final year projects by students, a printmaking studio demonstration by an instructor, as well as a viewing of a musical film created by a student from the university. The students left beaming with inspiration and a newfound appreciation for art and various art forms.
- Program stocktakes took place in Sindh and Punjab during this reporting period. SE&LD (Sindh) stocktake focused on bi-monthly targets, highlighted top performing schools, and included briefing and support mechanism for the upcoming STEAM Muqabulo. SED (Punjab) stocktake covered the district competitions and leveraging QAED Master Trainers for teacher training sessions as well as program support. More details can be found in the "Stocktake meetings" section under Program Management.
- Appreciation pathways for schools, teachers, and students have been developed to encourage performance and attract inspiration. These include congratulatory messages in WhatsApp groups, highlighting best activities on various platforms, digital certificates, and STEAM Safari trips.
- STEAM Pakistan held multiple exploratory conversations with existing and prospective partners discussing avenues to initiate and build on collaborations. Such conversations were held with IBA Karachi, Habib University, Indus Valley School of Art and Architecture, University of Sindh, and GetzPharma.

Moreover, the program activities and outputs are being tracked against deliverables for the purpose of monitoring and evaluation. The bi-monthly STEAM report will contain an overview of the program outputs and the challenges encountered during implementation.

Project update

This section of the report will include strand-wise updates for the deliverables covered within the months December to January.

Learning

This section will provide updates on partner school's status as of January 2024 by geographical coverage, level of activities, student and/or teacher engagement, an update on training/fresher sessions, orientation sessions, and/or portal development.

1. Partner Schools' Highlights

A. Journey to date

4,224 Government Schools Engaged

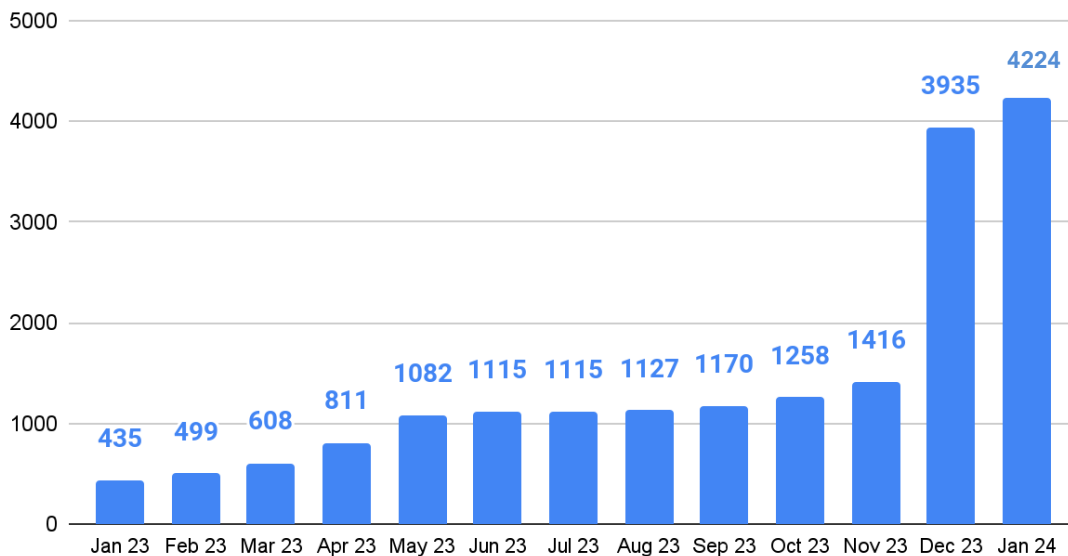
86 Districts Covered

264,700 Students Engaged

70% Girls, 30% Boys

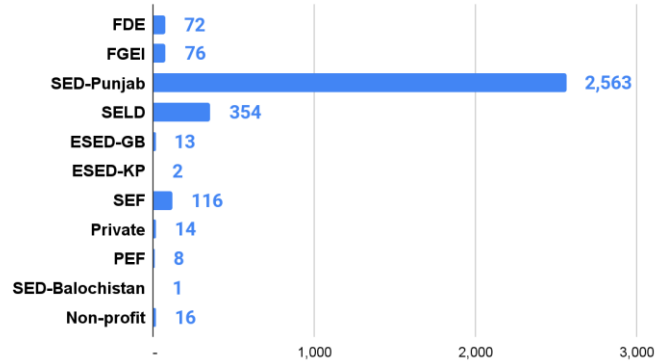
1,236 STEAM Clubs

No. of Schools Registered Over Time

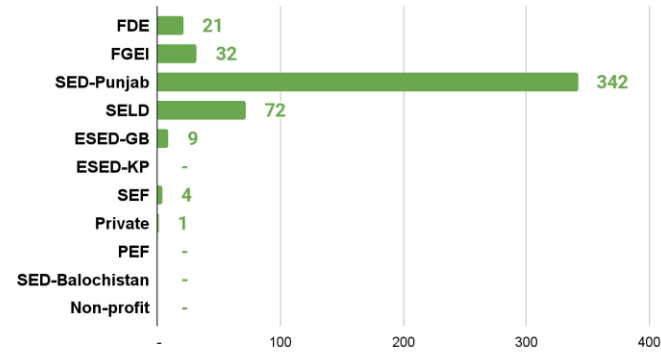


B. Level-wise progress

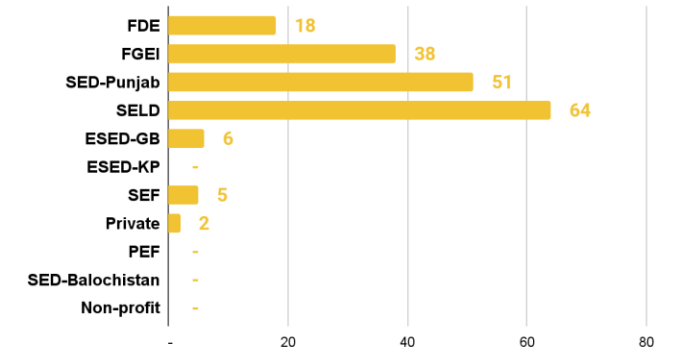
Level 1 by Institute



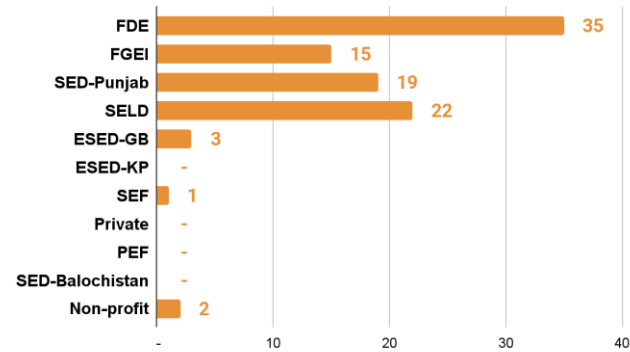
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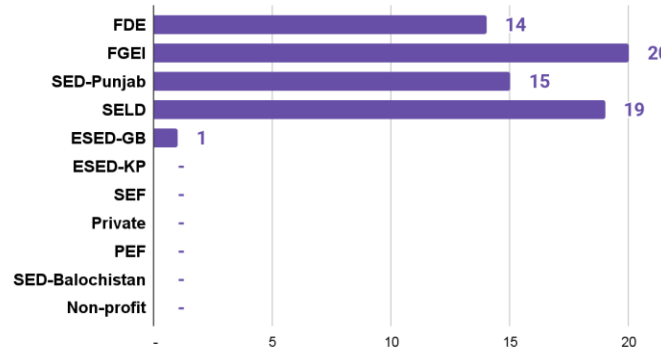
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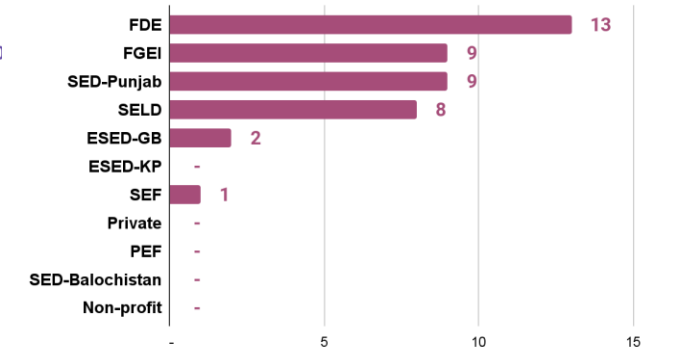
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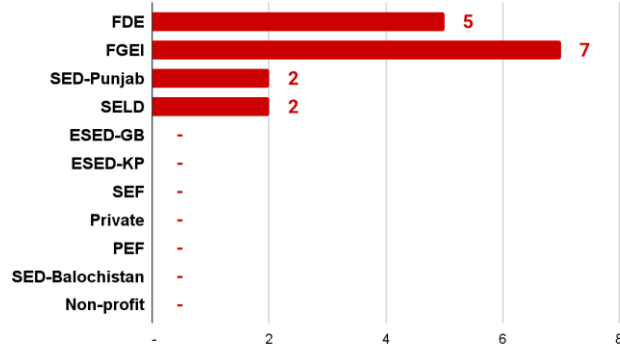
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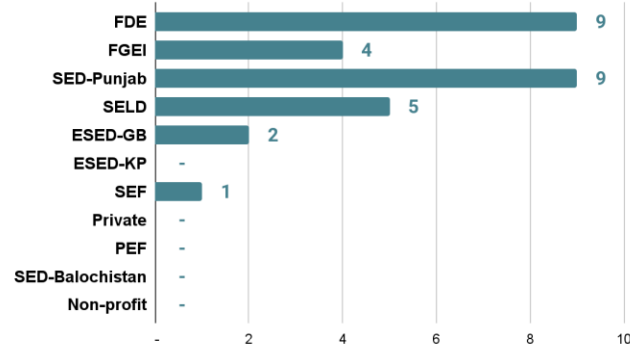
Level 6 by Institute



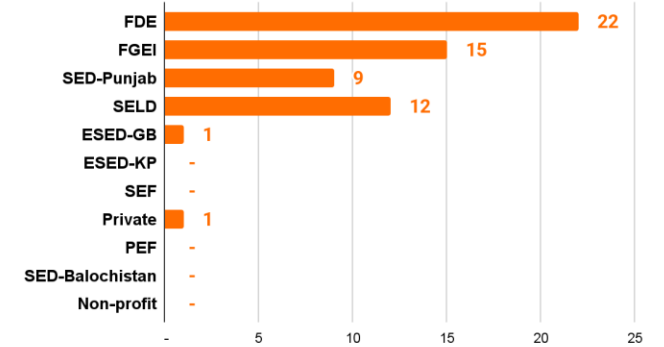
Level 7 by Institute



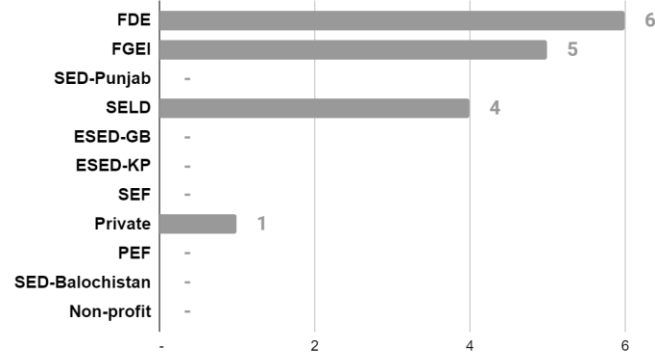
Level 8 by Institute



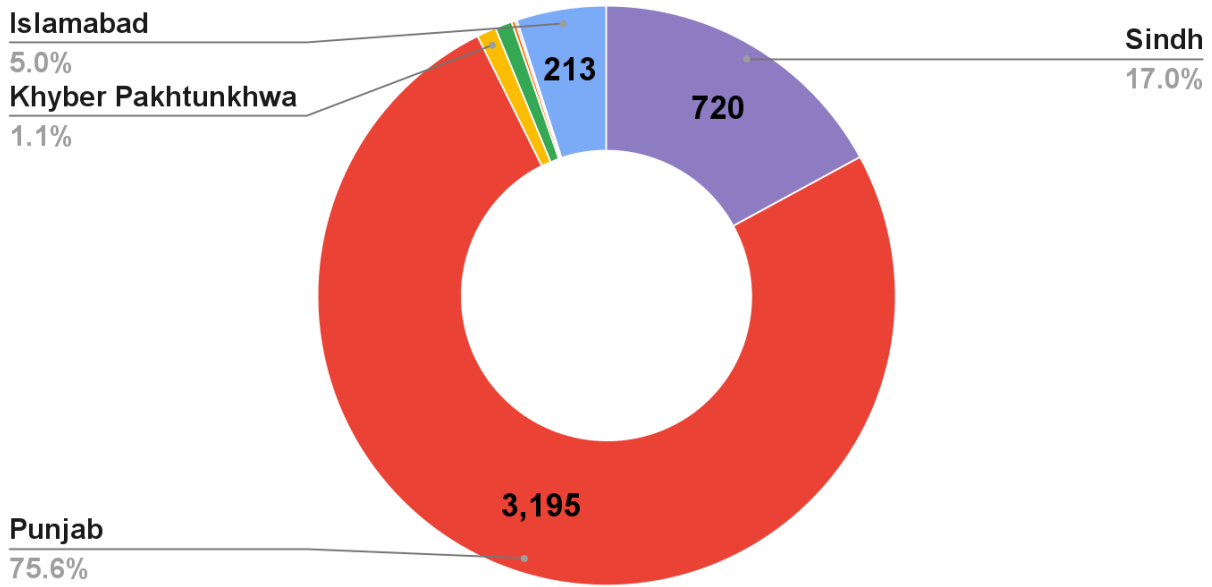
Level 10 by Institute



Star Journey Schools by Institute

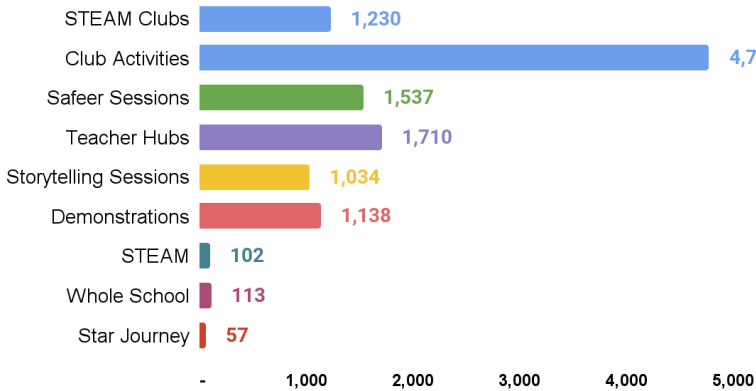


C. Region-wise partner school distribution

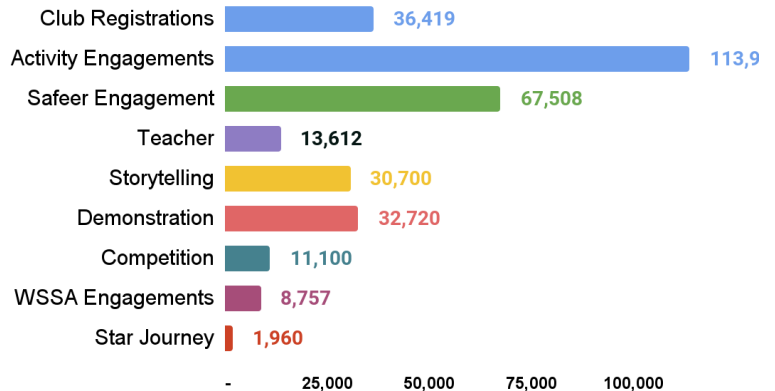


2. Activities in partner schools

Components



Engagements



2. STEAM Competition / Muqabulo

Federal Directorate of Education (FDE), Islamabad

In the months of December and January, STEAM Pakistan developed school round and area round videos and documents including instructions, submission forms, and posters. These were then shared with the schools through dedicated WhatsApp groups as well as notifications issued through the FDE. The school and area round instructions can be accessed [here](#) and [here](#) respectively. In the school round, conducted between 6th November and 5th December, approximately 2,280 students from 76 schools participated out of which 57 schools qualified for the area round.

Area Round

In this round, 57 schools and 681 students participated covering all six sectors. The Area Round was held on the 16th of January with centers (i.e. host school) designated for each of the six sectors in Islamabad. To judge the event, AEOs from other sectors and external organizations and universities were invited. The agenda for the Area Round can be viewed [here](#) which included Science, Math, and Art displays and performances. At the end, host schools were given a token of appreciation from STEAM Pakistan on behalf of the judges. Sector-wise pictures from the rounds can be viewed [here](#). Results are to be announced in the following week with the final award ceremony tentatively scheduled after Eid.

Sindh Education & Literacy Department

STEAM Muqabulo, the first-ever STEAM Competition for the partner schools in Sindh was launched on 5th January 2024 and was announced through an SE&LD letter accessible [here](#). An announcement was also made by the department on Facebook, the post for which can be viewed [here](#). The competition was open to all partner SE&LD schools as well as to SE&LD schools in 10 designated districts, 6 from Karachi and 4 from other parts of Sindh. In addition to informing schools via the letter, social media, and a TikTok style intro video shared by the Sindh Policy Unit, an orientation session regarding the competition was also held on 10th January. A dedicated STEAM Muqabulo WhatsApp Helpdesk was also set up to answer queries.

12,082 students from 200 schools participated in the school round consisting of 3 interdisciplinary STEAM challenges, namely (a) Beat the Heat Challenge, (b) Build a Bag Challenge, and (c) Postcard Design Challenge. A STEAM Learning Game Design challenge was also launched for teachers, to be judged in the district round.

The next round will be held in the 10 districts between the 14th and 16th of February and the final round will be on 29th February in Karachi. For the final event, STEAM Pakistan is expecting 5,000 students and teachers taking part in live STEAM challenges like a STEAM game show, math escape room, STEAM Safer series, teachers' workshops, and speed mentoring and exciting prizes. Partners currently on board for the upcoming rounds include Habib University, NED University, Zindagi Trust, IBA Karachi, NUST, IRD, and Pakistan Science Club.

3. Meetings with FDE and SE&LD

Director General (DG), FDE

The Director General FDE, Mr. Tanwir Ahmed set up a meeting with all associated programs, including STEAM Pakistan for developments and follow-ups. The team presented an update on the progress of schools according to their areas in Islamabad. Additionally, the upcoming STEAM Competition details were also discussed.

As a result of this meeting, the DG requested the Area Education Officers to actively pursue schools that are lagging behind and appreciated the two sectors that took the lead and were at level 7 and above.

Area Education Officers (AEOs), FDE

On 19th December, a meeting was held upon the request of the newly appointed AEOs to help them understand the work of STEAM Pakistan's various strands and update them regarding school progress with respect to the partner school journey. Below is the summary of the discussion that took place:

- Learning team shared the overview of the STEAM Pakistan
- FDE's STEAM competition was discussed. AEOs participation as judges at the area round of the STEAM competition was requested
- Briefing was given regarding the STEAM Pakistan Portal and its functionality
- Access details for the portal (login details) were shared with each AEO to allow them live tracking of the schools in their area
- List of all level 1 and 2 schools from each sector was shared with AEOs for their action

District focal persons, SE&LD

Weekly check-ins with district focal persons for SE&LD schools were agreed in the second stocktake held on 17th October. Since then, the STEAM Policy Unit has been having bi-weekly check-ins with the district focal persons regarding the progress of their district's schools in the STEAM School Journey.

DEOs and district focal persons, SE&LD

Throughout January online and in-person meetings were held with all DEOs and/or district focal persons regarding the planning of the STEAM Muqabla in their district, first to encourage maximum participation in the school round, and next to plan their respective district events.

4. Partner schools onboarding

School Education Department (SED), Government of Punjab

SED Punjab notified a list of 2700 schools that STEAM Pakistan will be onboarding i.e. school registration at the STEAM Pakistan platform. A detailed notification ([link](#)) including instructions for registration was shared with these schools through CEOs. Registered schools have been undergoing district-wise orientations held by the STEAM Pakistan team. Till date 2,546 schools have registered.

Orientation sessions are a key feature for the newly registered schools with STEAM Pakistan. The registered schools have been undergoing district-wise orientation sessions according to the schedule below. Sessions from 5th December 2023 to 4th January 2024 saw participation from 819 head teachers/teachers from 448 schools. Additionally, sessions from 11th to 29th January witnessed a sizable attendance of 3,000+ teachers invited from 2,406 schools. It must be noted that due to the participant limit on Zoom which was increased following the session on 15th January, not all invited schools were able to attend the sessions. These remaining schools will be requested to attend weekly refresher sessions in February.

Date	District(s)	Online participants	Mode
29-Jan-24	Pakpattan, Rawalpindi, Sahiwal, Sargodha, Sheikhpura, Sialkot, Toba Tek Singh and Vehari	1000	Virtual
22-Jan-24	Lahore, Layyah, Lodhran, Mandi Bahauddin, Mianwali, Multan, Muzaffargarh, Nankana Sahib and Narowal	1000	Virtual
15-Jan-24	Attock, Bahawalpur, Chakwal, Chiniot, Faisalabad, Gujranwala, Hafizabad, Jhang and Kasur	500	Virtual
11-Jan-24	Bahawalnagar, Gujrat, Khanewal and Okara	500	Virtual
Date	District(s)	Schools in Attendance	Mode
04-Jan-24	Rajanpur	49	Virtual
02-Jan-24	Bhakkar	59	Virtual
29-Dec-23	Khushab & Jhelum	68	Virtual
28-Dec-23	Khushab & Jhelum	104	Virtual
07-Dec-23	Dera Ghazi Khan	59	In-person
06-Dec-23	Rahim Yar Khan	56	In-person

Date	District(s)	Schools in Attendance	Mode
05-Dec-23	Rahim Yar Khan	53	In-person

SE&LD

Orientation sessions for SE&LD partner schools were held from 11th December 2023 to 24th January 2024 with participation from 307 head teachers/focal persons from 233 schools. Details from these sessions can be viewed below.

Date	District	Schools	Mode
24-Jan 24	Shaheed Benazirabad, Khairpur, Karachi Malir	80	Virtual
15-Dec-23	Karachi South	55	In-person
12-Dec-23	Sukkur	41	In-person
11-Dec-23	Larkana	57	In-person

5. Refreshers

In person refresher trainings in Islamabad

In-person refresher sessions previously scheduled for FDE schools in Sihala, Nilore and Tarnol have been delayed for the remaining sectors till the new academic session in March/April. This is on account of examinations/vacations in the schools as well as elections.

Weekly virtual refreshers

STEAM Pakistan initiated virtual weekly refreshers for all institutions starting August last year. These are optional sessions aimed at recapping various elements of the school journey as well as addressing any problems teachers might be facing in progressing further. Six sessions have been held in the months of December and January with 300+ teachers participating. These sessions are generally held on Mondays each week from 3-4 PM. The schedules for the months of December and January can be found below:

Sr. No.	Theme of session	Date	Time
January 2024			
1	Level 5 - STEAM Safer Refresher Session + Reporting	29-Jan-24	3-4 PM
2	Level 2 & 4 – Student Registration & Perception Survey + Storytelling + Teacher Hub	22-Jan-24	3-4 PM
3	Level 2, 3 & 6 - Student Registration & Perception Survey + STEAM Club + STEAM Club Demonstrations	15-Jan-24	3-4 PM
4	Level 9 – Whole School STEAM Activity + Reporting	08-Jan-24	3-4 PM
December 2023			
5	Level 4 - Storytelling +Teacher Hub + Reporting	18-Dec-23	3-4 PM
6	Level 2,3 & 6 - Reporting + STEAM Club + STEAM Club Demonstrations	11-Dec-23	3-4 PM

6. New training components

Classroom observation tool

STEAM Pakistan in collaboration with the Federal Directorate of Education continued the classroom observation pilot in 21 schools. The pilot is aimed to conclude before the final examinations set in February. Head teachers were encouraged to observe their teachers and mark their progress each month on a google sheet form. As of the end of this month, a total of 223 observations have been carried out by the schools, completing the pilot phase.

The results of the pilot were presented in an update meeting to Tanwir Ahmed, Director General (DG) FDE, on 4th December 2023, where he agreed that the pilot should be scaled to the rest of the Islamabad Capital Territory. As a follow-up on Dec 14th 2023, the team further discussed the details of the scale-up with Director (Academics & QA), Ms. Riffat Jabeen and Deputy Director (R&D/M&S), Mr. Nadeem Ahmad.

It was decided that the pilot will be scaled-up in the coming academic year (in April), through two coordinators (head teachers) assigned to each AEO who will be responsible for conducting training, updating the tool, and content and monitoring/visiting schools. The STEAM Pakistan team will continue to provide technical support during the scale-up.

7. Monthly Maker Challenge (MMC)

December 2023

Owing to examinations and vacations, the Monthly Maker Challenge was on a break for the month of December and resumed in January.

January 2024

Pakistan Science Club and STEAM Pakistan are thrilled to unveil the latest challenge aimed at tackling a critical aspect of everyday life – water heating. This month, schools and students are invited to embark on a journey of innovation and creativity by designing a water heater or water geyser using any easily accessible materials at their disposal.

The objective of the task is to engineer a water heating solution that is not just efficient but also utilizes commonly available materials. It was encouraged to explore inventive ways to optimize water heating processes while keeping sustainability in mind. The goal was to revolutionize how households access hot water, promoting both conservation and efficiency.

8. School appreciation pathways

Based on input from teachers of the partner schools, STEAM Pakistan is constantly working towards exploring avenues to appreciate schools, students, teachers, and head teachers. This endeavor is based on internal data that reflects improved performance by the schools and those involved in activities when their efforts are recognized and celebrated. The following have been implemented and initiated in this light.

- Weekly congratulatory messages in WhatsApp groups indicating schools that have leveled up in the journey
- Select best activities from school submissions on the portal are shared in WhatsApp groups as well as posted on the STEAM Pakistan website to not just appreciate the effort of the schools conducting them, but also for others to take inspiration from them
- Digital certificates are now given to schools which have achieved levels 5 and 10
- STEAM Safari - school field trips to science museums or similar learning sites - has been initiated for top performing schools. While currently taking place in Karachi, this will also expand to other parts of Sindh and Pakistan

9. STEAM portal

The school STEAM Portal is a platform for schools to access important resources such as guides and tutorials for school staff. Additionally, all reporting activities are performed through this portal. It can be accessed on the STEAM Pakistan website (www.steampakistan.com). Along with multiple other tweaks, following are significant developments taking place between December and January:

- The Star Journey has been incorporated into the portal with schools being able to select relevant components to upload. Their progress is also reflected accordingly with stars (instead of levels).
- An infographic showing the pending and complete items of the next level for a school has been deployed
- For the admin log in, buttons were deployed allowing complete downloadable data dumps, a process that was recently hindered due to the magnitude of data now on the portal.
- User logs were generated and deployed, enabling the team to view when a school logs in and levels up. This log helps in aggregating data in one place for the weekly congratulatory messages sent out to schools for appreciation

10. Helpdesk

A helpdesk has been set up to file queries from focal persons of our partner schools regarding STEAM journey levels, activity ideation and the portal reporting mechanism. The helpdesk is functional across three avenues of communication.

- Schools can reach out with queries over WhatsApp (0300-0606063)
- They can reach out via email at info@mathsandscienc.pk
- Zoom helpdesk - Tuesdays and Thursdays, 10:30 AM to 11:30 AM and 3:00 PM to 4:00 PM

11. Analytics for existing video content

Statistics for existing STEAM Pakistan content on [YouTube](#) can be viewed below:

Months / Cumulative	Modules	Views	Hours Watched
December - January	1	23,757	635.4
Cumulative	51	63,292,	1,721.5

STEAM Safer

The STEAM Safer component of the program aims to inspire students and connect them with skilled professionals who use STEAM concepts on a daily basis. Through sessions, STEAM Safer exposes students to available in-school and out-of-school resources in the form of mentors who share their experiences, expertise and achievements to inspire and motivate them.

14 Government Schools engaged

17 Sessions Conducted

799 Students Engaged

12 Professionals

10 Organizations

**9 Districts
Covered to
Date**

Newsletter

Newsletters published in the months of December and January can be accessed below:

- [Nov 23](#)

Due to school activities being paused on account of exams and vacations, a combined newsletter for December and January is being prepared and will be shared in the following report. Previous monthly STEAM Safer newsletters can be accessed [here](#).

Dedicated webpage and portal

A dedicated landing page for STEAM Safer and a back-end portal has been designed and developed. The landing page has been live at www.steampakistan/safer since January 2023. The latest development on the Safer portal is enabling user logs which allows the admin to review activities that have been taking place on the portal.

Waasta team pilot

The Waasta program is based on school facilitation through continuous engagement with the school. Currently the STEAM Pakistan team is conducting an internal pilot for this component by visiting schools and engaging them twice a month. Activities include but are not limited to ones conducted by Safer sessions.

Policy Deliverables

Sindh

STEAM Awareness Session

Picking up from the STEAM Awareness Session conducted previously in November, Muhammad Ahsan, a celebrated Hyderabad district STEAM focal person and Head Teacher of Govt Boys Lower Secondary School Qazi Akbar Hyderabad (Campus) continued these sessions by himself through 4 conducted in December. The purpose of these sessions was to popularize STEAM education with a more hands-on interactive approach to improve learning outcomes. Details from these sessions can be viewed below.

Date	Link to highlights
09-Dec-23	Link: Session 1
09-Dec-23	Link: Session 2
05-Dec-23	Link
02-Dec-23	Link

Gilgit-Baltistan

Development and finalization of marking schemes

The STEAM team has played an important role in enhancing the educational evaluation process for the Board of Elementary Examination Gilgit-Baltistan (BEEGB). For the first time, BEEGB developed detailed marking schemes in December 2023 for all subjects to assess students' scripts with the technical support of the STEAM member. Assessors were strongly advised to adhere to these marking schemes to ensure fairness and consistency in marking assessments of students' scripts.

Snowbound region assessments

The STEAM Pakistan representative also contributed to the assessment of students' scripts from the snowbound regions of Gultari and Astore, particularly in the examination scripts for humanities subjects like social studies, history, and geography. This includes developing and reviewing exam questions/papers, providing constructive feedback to the academic staff of BEEGB to enhance the quality of exam questions, guiding them in the development of effective marking schemes, and marking exam papers.

Rechecking committee

STEAM Pakistan was also requested to participate in the rechecking committee formed to quality check student answer scripts of divisional and Gilgit-Baltistan level top 10 students. When done,

this committee will be responsible for reporting back any issues in the evaluation process as well as top 3 position holders.

Partner schools in Hunza, Ghizer, and Nagar

To expand the STEAM Pakistan project, the policy unit in collaboration with the Gilgit Baltistan Education Department, is planning to onboard schools in three additional districts, namely, Hunza, Nagar, and Ghizer starting from the upcoming session. In this regard, discussions have been held with the Additional Secretary of Education to CS, and the Director General of Schools.

Punjab

Meeting with QAED

After the stocktake held on 4th January, details for which can be found in the “Stocktake meetings” section under Program Management, a meeting was held with the Director General QAED on 23rd January 2024 to discuss next steps with QAED. The main decisions can be viewed below.

- QAED will provide a list of 100 Master Trainers who will then be trained to check STEM Club reports. This list will be shared by QAED by the last week of January 2024.
- QAED’s official calendar will include STEM trainings and quarterly Teacher Pedagogical Challenges.
- A follow up meeting will be held with QAED to finalize the calendar and the upcoming trainings schedule.

Since the meeting, the Punjab policy unit has developed a selection criterion for master trainers which was shared with QAED for selection of MTs checking school reports on the portal. Additionally, participation of master trainers in weekly refreshers held every Monday at 3 PM was notified.

Federal

Matriculation exam analysis

In the past two months, the team collaborated with Pakistan Institute of Education, Inter Boards Committee of Chairmen (IBCC), and its member Boards of Intermediate/Secondary Education (BISEs/BSEK) to arrange national training workshops on data analysis techniques on 5th December, 2023. The purpose of the workshop was to provide technical assistance on analyzing data and gain access to the examination results. Researchers from 28 intermediate/secondary education boards were invited to participate and understand the 3 tools produced by the PAMS and PIE team.

In the past 2 months, the team has been collecting and corroborating the data provided by the boards throughout the country. Preliminary data cleaning is currently underway, with the aim to begin the analysis next month.

STEM classroom observation tool for head teachers

STEAM Pakistan facilitated the development and initial delivery of a classroom observation instrument for head teachers in FDE schools. The goal is to enable head teachers to conduct periodic observation and guide teachers in very specific areas (content, pedagogy, assessment, classroom engagement and others). The pilot phase of this component has been completed, and it has been discussed to be scaled up in the next academic year. More information on operational delivery of the pilot can be found in the learning section of the report.

Partnerships

University Partnerships

Overview

To date, STEAM Pakistan has signed LoU with a total of 12 universities and successfully onboarded 15 other universities. 8 universities are actively conducting STEAM activities with their partner schools in various regions of Pakistan. An LoU is expected to be signed with the remaining universities, NUST, COMSATS, Bahria University Karachi, and Habib University Karachi being in the highlight.

IBA Karachi

Dr Shabana Nisar, a particle physicist from IBA Karachi, in her recent interaction with school children at GBSS Ishat-ul-Quran, discussed the philosophy of science, underscoring the crucial roles of reasoning, curiosity, and logic in the scientific process. She conveyed how physics serves as the linchpin of every technological breakthrough and invention, elucidating how physicists combine imagination with intricate math to unravel the profound mysteries of the universe.

She then embarked on a captivating journey through the annals of scientific history, drawing attention to the rich scientific cultures of ancient Greece and the Islamic world. She showed them how ancient Greeks and Muslim scholars calculated Earth's radius by using simple and basic geometry and trigonometry.

Habib University Karachi

A Mathematics workshop was conducted for 37 teachers from six schools in Korangi, Karachi, in collaboration with Habib University and LUMS. Rameez Ragheb, Lecturer at Habib University, along with Dr Adnan Khan from LUMS led the session. The workshop aimed to enhance the teaching pedagogies of educators. Participants actively engaged in the workshop, where they not only learned new and innovative teaching techniques but also discovered fun tricks to make math an exciting and accessible subject for their students. The collaboration between Habib University and LUMS showcased the commitment to improving the quality of education by fostering a dynamic learning environment for both teachers and students. The workshop proved to be a valuable platform for professional development, leaving the teachers inspired and equipped with creative strategies to enhance the learning experience for their students.

STEAM Pakistan also renewed its conversation with Dr Aatir Khan, Professor of Social Development and Policy and VP of Student Life, regarding a formal partnership with STEAM Pakistan, which he shared will now be taken forth through the Playground, a transdisciplinary center at Habib. The Center will likely also be supporting the STEAM Muqablo through a design workshop and a STEAM challenge for students. In addition, the university's faculty will be engaged in the district round of the competition as judges.

Indus Valley School of Art and Architecture (IVSAA)

The Indus Valley School of Arts and Architecture welcomed 60 6th and 7th graders from Karachi's best performing school in Lyari, GGSS Haji Wali Yaqoob, to the Degree Show 2023 in December. The schoolgirls and their teachers were inspired by the final year project displays, such as a larger than life weighing scale, a video game featuring Baaghar Billa, trees spilling out of a carpet weave, flower dyed fabric fashion, and much more that left them brimming with curious excitement.

The tour started from the printmaking studio with the instructor Abdul Hayee giving students a fun demonstration of how he puts together his plates to make his prints. He also spoke to them about his own inspiring career journey, starting from the IVSAA canteen to hosting multiple art shows of his brilliant designs. Towards the end, there was a screening of Seher-e-Sur, a film by IVSAA student, Hamza Makhdoom, that took the school's students on a fantastical musical journey about the Guardians of the Sur channeling the purity of their craft to break free from oppression.

Additionally, guided by the Student Council members, Sourah Balouch and Selena Jalbani, the students discovered innovative forms of artistic expression, sometimes derived from the everyday and mundane. Sourah, an alumna from DCTO School adopted by Kiran Foundation was the perfect role model for the school students, being a young woman from their own neighborhood in Lyari, excelling in her studies, and pursuing her passion for art and design.

The degree show was an organic way for students to be introduced to the various fields of study including Fine Arts, Architecture, Interior Design, Communication Design, Textile Design, Fashion Design and Filmmaking. The visit was sponsored by Engro Foundation. Highlights from the tour can be viewed [here](#).

Lahore University of Management Sciences (LUMS)

Dr. Adnan, an Associate Professor of Mathematics from LUMS University recently organized four inspiring math circles in two prominent schools, namely GGSS SMB Fatima Jinnah and GGSS No. 1 Liaquatabad. With a passion for promoting mathematical literacy and enthusiasm among students, Dr. Adnan aimed to transform the way children perceive and engage with mathematics.

Moreover, as part of LUMS outreach across the country, Dr. Adnan Khan and Dr. Saad Qadeer from the university conducted Math Circle workshops in Sukkur and Khairpur. Venturing into Rohri, Sukkur and Jani Buriro, Khairpur schools, the dynamic duo conducted two engaging LUMS Math Circles, igniting mathematical curiosity among the students. Their educational odyssey extended to IBA Sukkur, where they not only facilitated a Math Circle but also delivered a compelling public talk, amplifying the reach of mathematical exploration. The STEAM Policy Unit invited students and teachers from Sukkur's top performing school GGCHS Azizabad to participate in the Math circle / workshop at IBA Sukkur.

NED University

NED-UET will be supporting the STEAM Muqablo 2024 through a live science show and a STEAM workshop for teachers.

Updates on activities in universities

A major element of university partnerships is the range of activities that they undertake. These activities are designed to cultivate a close relationship between higher education institutions and schools. These could take the form of math circles, teacher baithaks, Safer sessions, university tours, field trips, boot camps and so on. Highlights from the last two months can be viewed below.

14 Government Schools Engaged

11 Sessions Conducted

484 Students Engaged

9 Faculty Members & Students

6 Organizations

25 Districts
Covered to
Date

Corporate Partnerships

Pakistan Cables

STEAM Pakistan, supported by Pakistan Cables, facilitated STEAM Safari visits for two schools to TDF MagnifiScience Center in Karachi in November and January. The third ever STEAM Safari was organized for GGSS Neelam Colony, Karachi South, the most active school for the month of October and the fourth trip was organized for GGSS No. 4 Korangi the most active school for the month of November 2023. Highlights from the third trip can be found [here](#).

Additional conversations

The team has presented sponsorship proposals regarding the FDE STEAM Competition, the STEAM Muqablo (Sindh), and the Punjab STEM Competition to Engro Foundation, Pakistan Cables, Interloop, Ismail Industries, GetzPharma and Reckitt. Proposals were also sent to House of Habib, EBM, SICPA Inks and Bank Alfalah. Avenues of collaboration are being explored.

Moreover, outreach to Durbeen, TDF Magnifiscience, Teach for Pakistan, WWF, LUMS National Outreach Program, NUST, Zindagi Trust, IRD regarding a thematic partnership for the STEAM Competition was a major part of the Partnerships team's efforts in January.

Partnerships with NPOs

Zindagi Trust

Zindagi Trust will be holding two workshops for the Program on the STEAM Muqabulo event in February. The first will be a workshop for teachers to convey the significance of art as part of “STEAM”. In the same workshop, they will also be taking the teachers through one or more of the guides produced by Zindagi Trust for STEAM Pakistan. A second workshop will be conducted by a different team from Zindagi Trust for students regarding digital safety.

Communications

This section highlights social media developments, the progress made in creating strategic plans, expanding communications guidelines for program impact and visibility.

Strategies and branding

Branding and visibility

Co-branded collateral was developed for the program’s activities with partners that include the Area Round of the STEAM Competition 2024 Islamabad iteration, partnered by FDE and MoFEPT, which was held in mid-January. The collateral was distributed to various schools, judges, and students in the form of certificates and gift cards. Co-branded collateral was also developed for the STEAM Muqablo 2024, partnered by SELD. The collateral can be found across STEAM Pakistan’s social media.

Earned media and influencer plans

The earned media plan is being developed with the support of an external communications expert; while the plan is being documented, STEAM Pakistan's outreach has already used its digital assets to engage and generate conversations around the program outcomes and can be seen from the earned media numbers, i.e., the number of posts and content shared from non-STEAM digital assets.

Social media

Statistics

December and January have seen strong growth on LinkedIn and Instagram, where followers have increased by 5% and 9% respectively. Below are the social media analytics for the months of December and January.

Platform	Posts	Stories	Accounts Reached / Profile Visits / Reactions	Engagements / Impressions	Followers	New Followers	Sample Post
Facebook	22	3	12.7K	8.5K	4,409	119	Link
X (Twitter)	27	-	-	8.3K	896	39	Link
Instagram	22	7	3,006	13.3K	1,645	135	Link
LinkedIn	23	-	598 (page views) 184 (unique visitors)	8.8K	2,227	110	Link
Threads	-	-	-	-	205	16	-

Celebration with SED Punjab

The Special Secretary SED Punjab was interested in highlighting prominent STEM Club activities taking place in Punjab schools. Hence, the Program started sharing notable activities with her via WhatsApp which then get pushed to SED Punjab's social media including X. 3 posts per week get shared with her.

Notable follows

Influential personalities/public figureheads who have followed STEAM Pakistan in the months of December and January are highlighted below.

Name	Role	Organization / Entity	Profile
Anam Mansuri	Founder of Womanistan. Digital Communications Specialist with a focus on gender and culture.	Womanistan	Link
Scientia Magazine	Official Page - A digital science magazine trailblazing the excellency in science.	Scientia Magazine	Link
Indus River Valley Institute	Official Page - Pakistan's first culture & heritage think tank	Indus River Valley Institute	Link

Driving conversations

This section covers conversations about STEAM Pakistan led by influential personalities. Below are social media posts made by such individuals/corporations in December & January.

Name	Role	Organization	Link to Post
Mahin Azam Khan	Co-Founder	CarbonWise	Link
UK in Pakistan	Official Page	UK in Pakistan	Link
LUMS Math Circles	Official Page	LUMS Math Circles	Link

Additional updates

Moreover, STEAM Pakistan events and activities were covered on all platforms, including:

- Area Round of the STEAM Competition 2024, which was held across 6 FDE areas,
- Inaugural STEAM Muqabla, a competition bringing together Science, Technology, Engineering, Arts, and Mathematics for students and teachers of grades 6-8 in 10 Sindh districts
- Mathematics workshop for teachers from six schools in Korangi, Karachi, held in collaboration with Habib University and LUMS,
- Large-scale Whole School STEAM Activity held by a Zindagi Trust partner school
- Third STEAM Safari trip, in partnership with Pakistan Cables, to the TDF MagnifiScience Museum in Sindh
- Newest installment of the Pak Science Club Monthly Maker Challenge collaboration

- STEAM Safer sessions
- Particular focus on STEAM activities conducted within partner schools across all provinces.

Program Management

Monitoring and evaluation

Once the feedback was incorporated, the final MEL baseline report was shared on 5th December by the third-party consultants. The report has been reviewed and the team is working to draft a plan for disseminating its findings.

Stocktake meetings

FDE: The Federal Directorate of Education (FDE) held its first internal stocktake with all its programs, including STEAM Pakistan in December 2023. Details for this meeting can be found under the “Meetings with FDE and SE&LD” segment in the Learning section.

Sindh: Third stocktake for SELD was held on 19th December with participation by select DEOs or their relevant STEAM focal persons, following up on the bi-monthly targets for activities by schools in their districts. Top-performing districts and schools were also appreciated. Additionally, the upcoming Sindh STEAM Muqabla was also discussed, with districts committing to support the competition. Meeting minutes from the third stocktake can be accessed [here](#).

Punjab: A stocktake was held in Punjab on 4th January 2024 under the chairpersonship of Special Secretary, School Education Department, Punjab. Representatives from the School Education Department, Quaid-e-Azam Academy for Educational Development (QAED), and Punjab Education Commission (PEC) were present. Main decisions can be viewed below.

- 100 STEM Champions to be on-boarded to check and validate schools’ STEM activity reports from January to May 2024.
- In January, STEM Policy Unit / PAMS will conduct virtual refresher sessions for Master Trainers who have attended orientation sessions.
- After the training sessions, the QAED Master Trainers will conduct in-person teacher training sessions in February.
- STEM Policy Unit / PAMS to provide teachers’ competition formats for province-wide competitions by QAED every quarter.
- QAED to roll-out first pedagogical (STEM) challenge for teachers in February 2024.
- Summary to be sent to the CM Office for approval of the LoU between SED Punjab and PAMS.
- Possible avenues of funding to be explored to ensure that STEM Clubs receive funds, and efforts to be made to seek approval of the revised STEM Initiatives’ PC-I.
- STEM Policy Unit/PAMS to conduct STEM engagement activities in the SED Office with SED staff.
- SED to notify an intra-departmental review calendar for a regular intra-departmental review of all programs, projects and activities.

Meeting minutes can be viewed [here](#).

Bi-monthly reporting regime

Institute-specific bi-monthly reporting has been initiated starting August 2023. Each month, three institutes will receive their reports, while three others will receive them the following month with this cycle repeating. The reports shared and upcoming schedule can be viewed below.

Report covering October to November 2023

- [E&SED - Gilgit Baltistan](#)

Reports covering November to December 2023

- [FDE](#)
- [FGEI](#)
- [SED Punjab](#)

Reports covering October to 10th January 2024

On account of examinations and vacations, it was decided that reports for these two institutions be sent comprehensively from October to 10th January.

- [SE&LD](#)
- [SEF](#)

Subsequently, follow-up reports to the aforementioned two institutions as well as E&SED GB will be sent out in March.

Challenges and Mitigation Strategies

This section of the report will include critical challenges addressed during the two months, and the respective mitigation strategy for the challenge. Dedicated efforts from all stakeholders will be required for timely delivery of program components within the revised work plan.

Challenges	Mitigation Strategy
School's reporting load had increased significantly, especially since the Punjab school signups	<ul style="list-style-type: none"> a) The learning team started assigning reports to the rest of the STEAM team for checking b) In order to make this a sustainable process residing at SED, the Punjab Policy Unit requested 100 MTs from QAED to be trained on the process of report checking of Punjab schools
Uncertainty within the bureaucracy resulting in delayed approvals and/or appetite for new initiative/component given the sensitive political environment leading up to the General Elections 2024	STEAM Pakistan consciously refrained from engaging politicians as per the risk management and mitigation plan, and postponed/intentionally scheduled prominent events and policy reform related conversations till after General Elections and formation of new government