



Monthly Report - June 2023

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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.

The monthly update for the program will entail updates on all work streams and strands. Major milestones achieved during the month of June 2023 include:

- 1,122 STEAM partner schools have signed up for the program as of June 30, including 40 school sign ups in June.
- An MOU between STEAM Pakistan and Girls Makes Games (GMG) was signed on June 5th. Through this partnership, STEAM Pakistan will be introducing the design and tech behind video games to government schoolgirls across Pakistan, in order to create transformative learning and growth opportunities for them.
- The first phase of the mathematics summer camp led by IBA and facilitated by STEAM Pakistan commenced on June 5th and was attended by 57 students from 2 STEAM Pakistan partner government schools.
- A 3-day capacity building workshop for teachers from 100 FDE schools is scheduled in August. The workshops will cover Classroom management, Digital Literacy, Context-specific Lesson Planning and Delivery, Communications skills etc.
- A Game Design Workshop in collaboration with Girls Make Games (GMG) is scheduled to take place in IBA on July 8th. It will be attended by a total of 80 students from 4 STEAM Pakistan partner schools.
- 2 Safer sessions were conducted in the month of June (CEO, Pakistan Cables and Senior Education Specialist, The World Bank) engaging 82 students in Karachi and Islamabad

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

Project update – June 2023

This section of the report will include strand-wise updates for the deliverables covered within the month of June.

Learning

This section will provide updates on partner school’s status as of June 2023 by geographical coverage, level of activities, student and/or teacher engagement, an update on training/fresher sessions, orientation sessions, and/or portal development.

1,122 Government Schools Engaged

61 Districts Covered

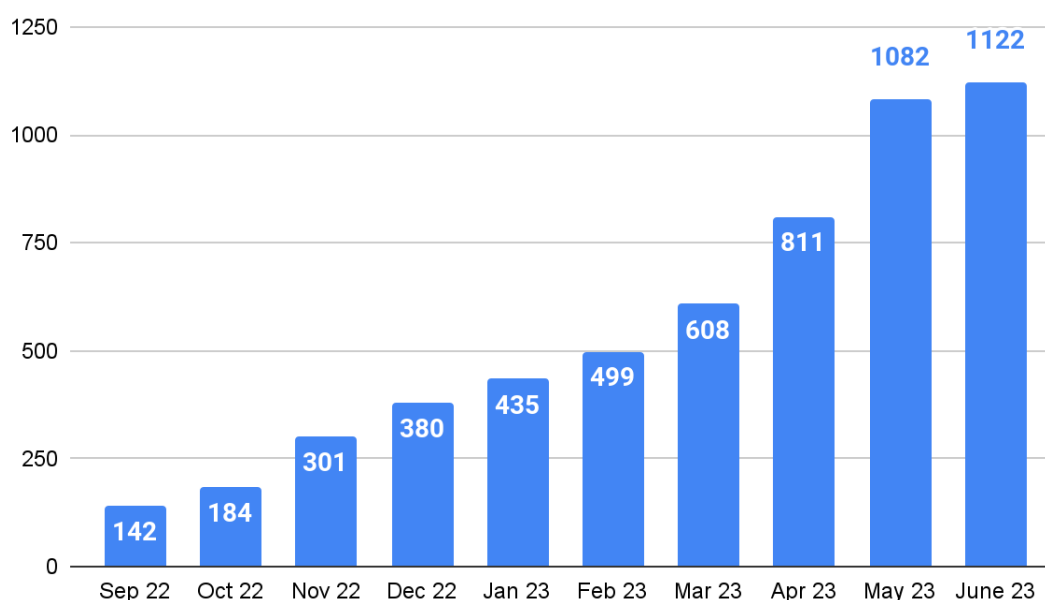
19,305 Students Engaged
67% Girls, 33% Boys

282 STEAM Clubs

1. Partner Schools’ Highlights

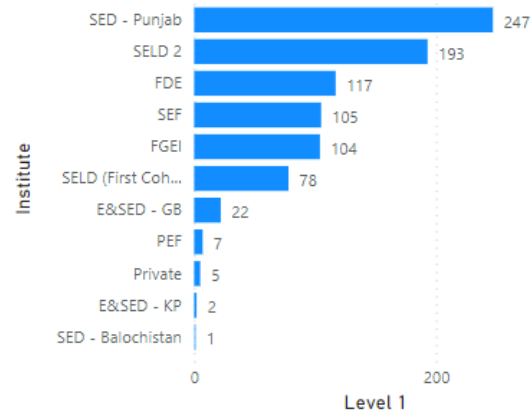
A. Journey to Date

No. of Schools Registered Over Time

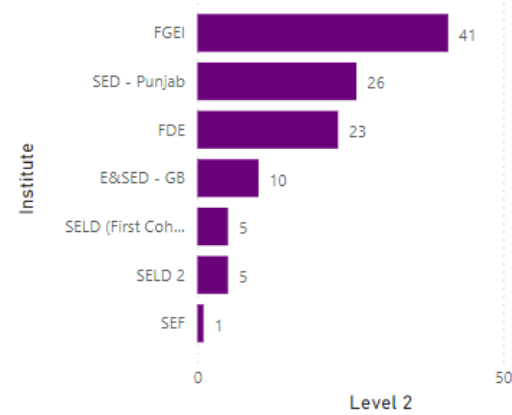


B. Level-wise progress*

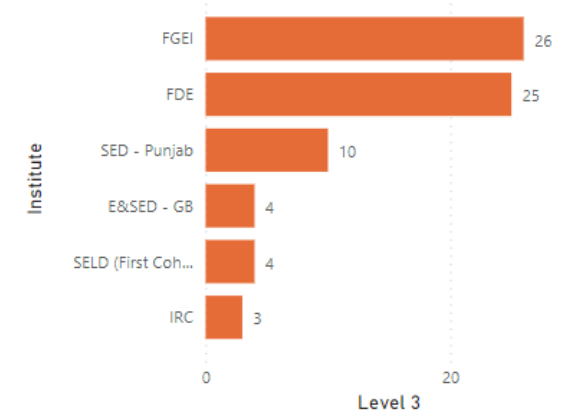
Level 1 by Institute



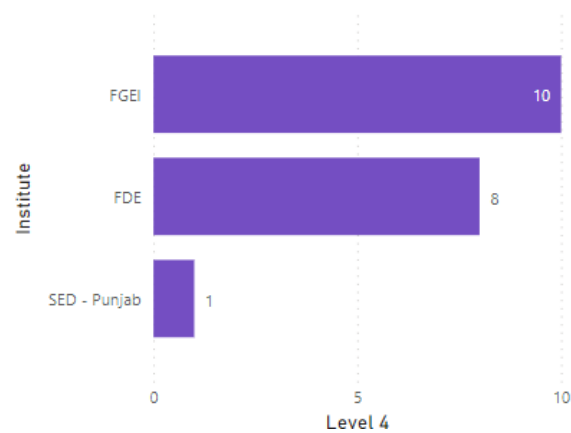
Level 2 by Institute



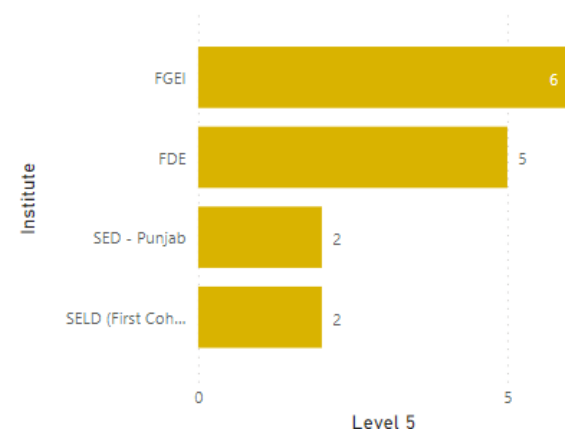
Level 3 by Institute



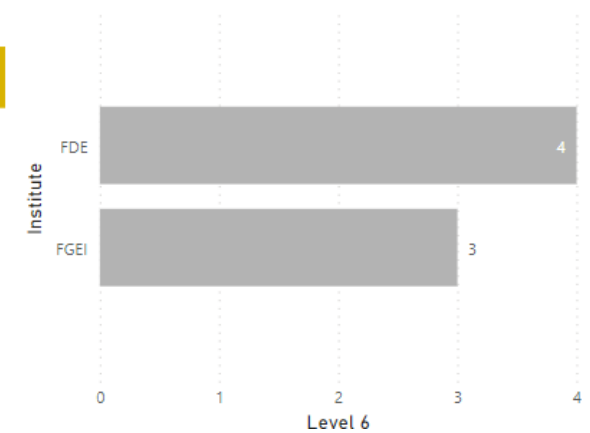
Level 4 by Institute



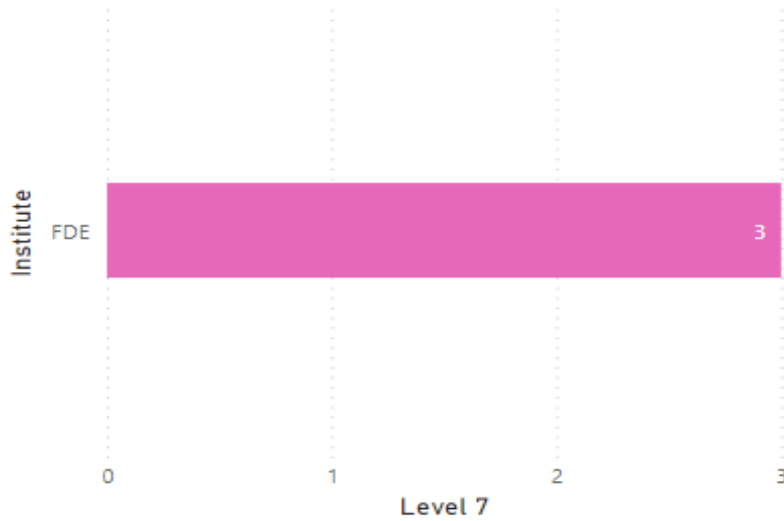
Level 5 by Institute



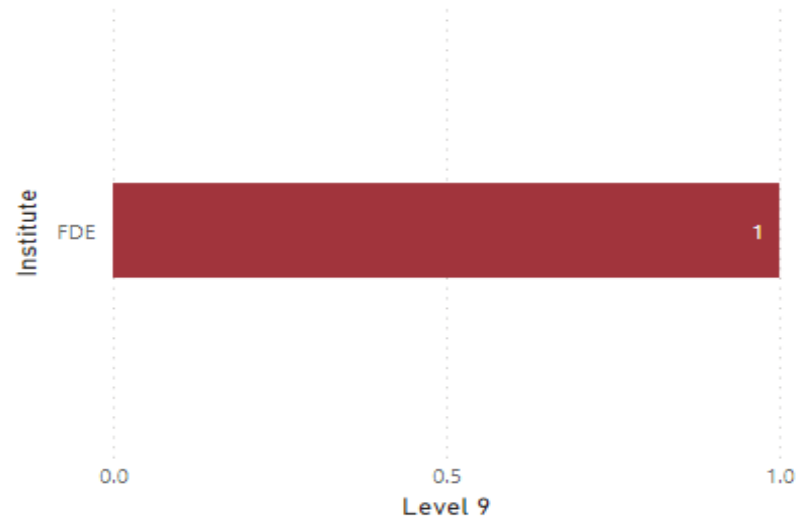
Level 6 by Institute



Level 7 by Institute

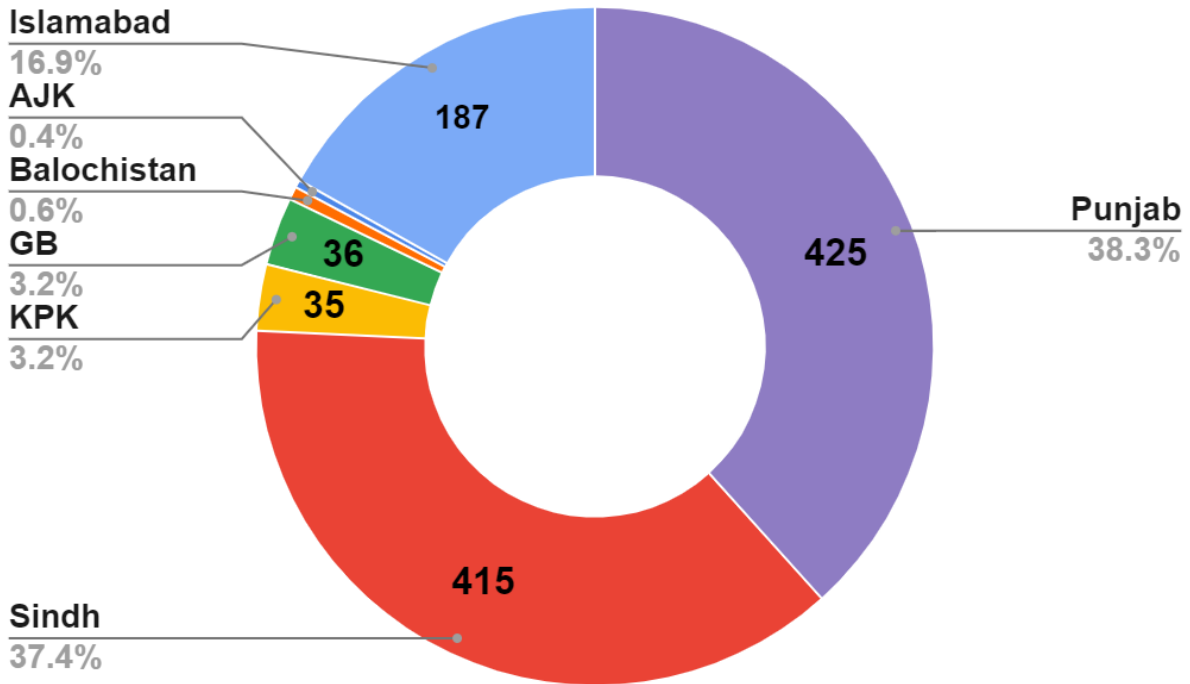


Level 9 by Institute



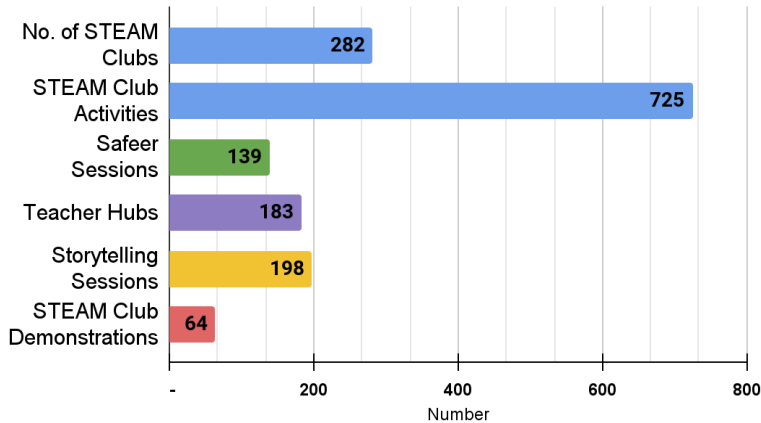
****Note: Level 1 for SELD and SED Balochistan includes schools which have only registered as of now for illustration purposes. Moreover, "SELD" schools are following the 5-level truncated journey while "SELD 2" schools are following the complete 10-level journey.***

C. Region-wise partner school distribution

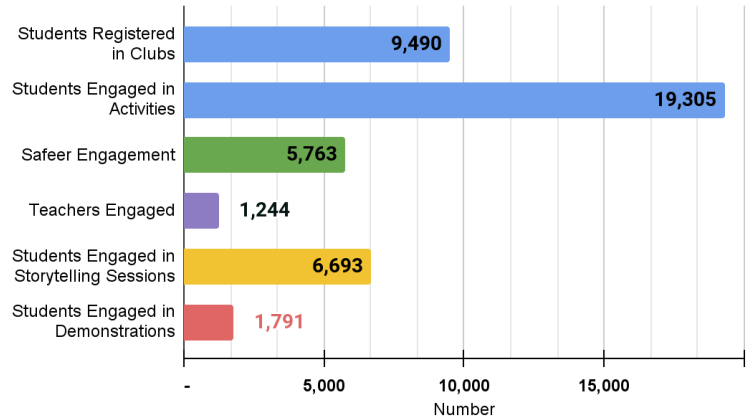


2. Activities in partner schools

Components



Engagements



2. STEAM Portal

STEAM Pakistan ‘school portal’ has been live since mid-August 2022. The portal supports content dissemination to schools via its landing page and assigns a dedicated account to each school. Focal persons from partner schools submit reports by logging in through a dedicated account. Development upgrades to the school portal are consistently taking place based on input from school teachers and the learning team.

Along with multiple other tweaks, following are significant developments for June 2203:

- Historic data of school reports on the portal has been backed up
- Steps were taken towards decrease dependency on local data tracking while ensuring accurate and reliable data directly from the STEAM Pakistan portal
- Website’s FAQ page has been updated with common queries received from school focal persons via helpdesk and in-person interactions

3. Helpdesk

A helpdesk has been set up to file queries from focal person 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

Since most partner schools had closed down for the summer vacations, given the decrease in the flux of helpdesk queries, the zoom helpdesk slots were reduced to 10:30 AM to 11:30 Am on Tuesdays and Thursdays only.

4. Analytics for existing video content

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

Month / Cumulative	Modules	Views	Hours Watched
June	0	1,765	47.9
Cumulative	34	17,487	452.8

5. Additional activities

Other activities the learning team has been involved in for the month of June are as follows:

- A 3-day capacity building workshop for teachers from 100 FDE schools is planned in the beginning of August. The workshops will be based on Classroom management, Digital Literacy, Context-specific Lesson Planning and Delivery, Communications skills etc. A

total of 16 comprehensive lesson plans, based on the first 5 chapters for the subjects of Maths and Science (grade 6,7 and 8) will also be shared with the participants.

- Development of 5 math activities for grade 6-8 students with the help of a hired university student resource
- Developed a plan for STEAM Pakistan's involvement in the 10-day GB summer fiesta and developed the Biruni-Sagan Award for a participating student.
- Developed the Biruni-Sagan Award as a follow up on the Gilgit Baltistan summer fiesta
- Assisted M&E with development of SLO assessment framework for grade 8 math and science curriculum
- Developed a MCQ based questionnaire with responses and feedback for responses for FDE's pedagogical support course for teachers
- Provided feedback for art guides developed by Zindagi Trust
- Developed/compiled 5 Mathematics hands-on activities. Some of these will be included in the Programme's Mathematics guides/manuals. In the immediate term, they will be utilized for summer engagements in Gilgit Baltistan.
- React videos were developed selecting 3 students from 3 schools recording their reactions to STEAM related Science experiment videos which they later performed as well.

STEAM Safer

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. The following STEAM Safer sessions were held in the month of June:

Date	Name	Designation	Organization	School	No. of students	Link to highlights
01-Jun-23	Izza Farrakh	Senior Education Specialist	World Bank	IMSG F-6/1	40	Link
09-Jun-23	Fahd K. Chinoy	CEO	Pakistan Cables	SMB Fatima Jinnah Government Girls School	42	Link

Newsletter

The newsletter for May issued in June can be viewed [here](#). 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 portal development team has been working on further upgrades to the Safer platform adding various functionalities which aim to enhance the user experience of the Saferers.

10-school FDE Pilot

The following section covers activities for the months of May and June 2023 in the pilot schools.

Science Mela

On 30th May 2023, under the umbrella of STEAM Pakistan, Science Fuse organized a Science Mela in Islamabad Model School for Girls G-8/2 with approximately 200 attendees. The event brought together the talent and zeal of school administrators, teachers and students from 10 schools in Islamabad. With a display of a vibrant Science Show, a thought-provoking panel discussion to discuss Gender Disparity in STEM education & careers, a performance on Nargis Mavalavala's story of resilience and continuing in the face of hardship, a thrilling Science "Muqabla" that put young scientists' brains to the test, and hands-on experimental workshops. Ms. Riffat Jabeen, FDE Director Academics, was invited as the guest of honor.

Focus Group with teachers and students - June 2023

Focus Groups will be conducted with a randomized group of teachers and students. The data gathered from the focus groups will be analyzed as part of the impact assessment of the program.

- Time: 10 AM to 11 AM
- Date: June 9th, 2023
- Day: Friday
- Venue: IMSG G9/3

A total of 7 teachers and 6 students will be interviewed as a part of the focus group discussions.

Resource Development

63 complete lesson plans for the following subjects were shared which can be accessed [here](#):

- Biology (14)
- Chemistry (16)
- Physics (15)
- Mathematics (18)

Policy Deliverables

Sindh

Minimum Standards Document, Sindh

A meeting was held with JICA on 30th May in which the work plan was shared for the “Governance and School Management” volume. They recommended starting with a section for which standards already exist for the Programme to begin a gap analysis in order to make and demonstrate quick progress. It was agreed that curriculum would be the easiest area to begin.

JICA clarified that they would be playing a supporting role in the development of these standards. They aim to assist in conducting the gap analysis, review the existing documents, and provide recommendations based on the review. They also shared that JICA will try to facilitate the consultations required for development of the new standards.

For next steps, the program will perform an initial overview of the existing documents of the decided volume, conduct a gap analysis and draft key steps, and then set up a meeting with Dr Fouzia to discuss.

Gilgit-Baltistan

SLO Development

As a follow-up and outcome of the workshop held last month, SLO development is now complete. The new syllabus has been finalized and circulated for grades 5 & 8. These can be viewed [here](#).

Summer Fiesta 2023

The Chief Secretary Office, GB in collaboration with the School Education Department have launched a new initiative in Skardu, the Summer Fiesta which will be organized from 3rd to 13th July. Multiple organizations will be participating in this event. 2-3 schools from each district are selected to participate in an attempt to keep students engaged during their summer breaks. The agenda will include an array of indoor and outdoor activities with a particular focus on STEAM. Further details can be accessed in the note shared which can be viewed [here](#).

STEAM Pakistan has been afforded a 4 hour slot for various contributions. In each of the 10 days, 50+ students are expected to engage with the program activities daily with an overall engagement of 500+ students. The schedule for each day will remain the same and can be viewed [here](#).

Punjab

Letter of Understanding

- A meeting was held by the Law and Parliamentary Affairs Department on 25th May 2023 to discuss the Letter of Understanding. Representatives from both PMIU and STEAM Pakistan were present. Please refer to the letter [here](#) for more details.
- As a result, the Letter of Understanding was revised and then approved by the PD PMIU.
- The revised Letter of Understanding has been sent back to the School Education Department, Punjab and will subsequently be forwarded to the Law Department. It can be viewed [here](#).

Federal

Budget note for FDE school financing

STEAM Pakistan is following up and awaiting data from the Federal Directorate of Education (FDE) to inform the basis of the school financing budget note, as instructed by Secretary, MoFEPT in the last meeting.

STEM classroom observation tool for head teachers

The learning team put together a draft classroom observation tool for STEM subjects to enable head teachers to conduct period evaluations. A list of 15 indicators are shared with the FDE for feedback to be included in the final observation tool. Further meetings regarding the same are expected to take place in July-August.

Content training

STEAM Pakistan team met with the Director Academic in June to devise lesson plans and strategy for the upcoming content specific training for Mathematics and Science engaging teachers from FDE-schools. More details on the training content and schedule can be found in the 'learning' section above.

Partnerships

University Partnerships

Overview

To date, STEAM Pakistan has signed LoU with a total of 12 universities and successfully on-boarded 15 other universities. 8 universities are actively conducting STEAM activities with their partner schools in various regions of Pakistan. An MOU between STEAM Pakistan and Girls Makes Games (GMG) was signed on June 5th. Through this partnership, STEAM Pakistan will be introducing the design and tech behind video games to government schoolgirls across Pakistan, in order to create transformative learning and growth opportunities for them. The first phase of the mathematics summer camp led by IBA commenced on June 5th and was attended by students of 2 STEAM Pakistan partner government schools. An LoU is expected to be signed with the remaining universities, with NUST, COMSATS, Bahria University Karachi, and Habib University Karachi being in the highlight.

IBA Karachi

The first phase of the mathematics summer camp for 2 STEAM Pakistan partner government schools commenced on June 5th onwards. The camp was led by 2 IBA professors and accompanying students and supported by 2 student interns of STEAM Pakistan. Applications were received from 2 participating schools who were briefed by the program after which 30 students attended the summer school at IBA. The award distribution ceremony for the summer camp took place on June 23rd in which the parents were invited and prizes were distributed by Dr. Hisham Bin Zubair, Assistant Professor and Chairman Mathematical Sciences at IBA.. Glimpses from the mathematics summer camp can be accessed [here](#).

The second phase of the mathematics summer camp is scheduled to begin on July 3rd which will be attended by students belonging to grade 9 to 12.

Additionally, in collaboration with Girls Make Games (GMG), a game design workshop is scheduled to take place in IBA on July 8th. After a round of applications from 3 female and 1 male school, a total of 80 students were shortlisted. Posters for the workshop were designed and disseminated by the program along with visiting the schools to introduce the workshop and encourage maximum participation. STEAM Pakistan recruited 2 Technical leads, 1 Social Media lead, 1 Lead presenter and facilitators for the workshop who underwent a training session by GMG on June 17th. All leads and facilitators except Tech Leads are students of IBA.

STEAM Pakistan Facilitated an outreach activity for IBA's undergraduate Maths program at one of STEAM partner schools - SMB Fatima Jinnah on June 23rd. The talk was conducted by Dr. Hisham Bin Zubair Assistant Professor and Chairperson Mathematical Sciences and Dr. Danish Ali Assistant Professor and Program Director Masters. The speakers orientated students and teachers about the course framework of IBA's Maths programs as well as campus facilities for all students. The session also had an emphasis on informing students about the various avenues through which IBA offers financial assistance and need-based scholarships to their program applicants.

NED University

NED University related details can be found under “Pakistan Cables” under the “Corporate Partnerships” section below.

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.

Majority of schools and universities are closed on account of examinations or semester breaks/vacations. The details for activities that were conducted in the month of June can be found in the following section.

Math Circles

A one of a kind Maths Circles ‘Learning the Queen’s Gambit’ was led by on June 20th and was attended by 30 students from 16 schools. The session aimed at igniting the passion for chess among young minds and exploring its fascinating connections with mathematics. School students were guided through the fundamental moves and rules of chess. An assortment of chess puzzles was also included which added an element of challenge for the participants.

Date	Partner University	Session Lead(s)	School	No. of Students	Link to Highlights / Details
20-Jun-23	LUMS	Dr. Imran Anwar Dr. Waqas Ali Azhar	16 schools	30	Link

Corporate Partnerships

Pakistan Cables

Pakistan Cables has been a very active partner and advocate of STEAM Pakistan pushing the partnership with NED University. The company plans to support NED University tours for government schools by covering transport costs.

NED University has requested STEAM Pakistan to become a partner at PUAN (Pak US Alumni Network) which will entail four masterclasses of 5-day duration and two-day conferences on certain thematic areas including critical thinking through STEAM, over the next twelve months. STEAM Pakistan has submitted a proposal and a comprehensive 5-day masterclass for NED University Alumni and identified the key speakers, trainers and panelists which are as follows

- Wait, I don't see that | Optical Illusions (Jamal Anwar, STEAM Pakistan)
- Science communication and Public Engagement (Afrah Noor, STEAM Pakistan)
- Your Place in Space (Roshan Bukhari, STEAM Pakistan)

- Music - How we see it | Includes a live demonstration (Jamal Anwar, STEAM Pakistan)
- Inclusive STEM Education (Afrah Noor, STEAM Pakistan)
- Poetic justice (Roshaan Bukhari, STEAM Pakistan)
- Myth busting (Roshaan Bukhari, STEAM Pakistan)

Moreover, Pakistan Cables is supporting culture-related internships in Lahore and now are encouraging interns to conduct Safer sessions as well. This has now been made a part of their internship requirements. Additionally, the company is exploring the possibility of sponsoring student visits to TDF Magnificience.

In order to show commitment to the Safer Program, Mr. Fahd Chinoy, CEO of Pakistan Cables led an inspiring Safer session with young school girls on 9th June, 2023. Mr. Fahd spoke about persevering through setbacks and shared many examples from his school, professional and personal life, of endurance and determination in the face of adversity.

Outreach to more corporate entities under STEAM Pakistan is still ongoing.

Partnership with international Organizations

On June 5th, an MOU was signed between STEAM Pakistan and Girls Makes Games (GMG) which aims to support and encourage girls to pursue careers in the video game industry via game design and development workshops, summer camps and scholarships. Through this partnership, STEAM Pakistan will be introducing the design and tech behind video games to government schoolgirls across Pakistan, in order to create transformative learning and growth opportunities for them.

GMG will contribute to curriculum development, facilitator training and supervision of workshops on game design or development for students of STEAM Pakistan partner schools. Additionally, they will be supporting the cost of conducting game design and development workshops. GMG representatives will also conduct STEAM Safer sessions to motivate students in STEAM Pakistan partner schools.

The signed copy of the MOU can be accessed [here](#).

Partnership with national sports associations/bodies

A roll-out of a pilot in collaboration with the Chess Federation of Pakistan is expected once schools reopen in August 2023 after the summer vacations. The program development and review will be completed in June and July this year.

Partnership with organizations working with children with disabilities

The conversation with Karachi Down Syndrome Program (KDSP) is currently stalled due to senior management changes in their education and operations team. The partnership team is expected to reach out to KDSP's executive and senior leadership once the roles are filled to brief them about the cooperation conversations and finalize a timeline for the MoU and delivery of technical support.

Partnership with NPOs

Since October, Indus Resource Center (IRC) schools, under the Nisar Science Fellowship, have formally been inducted into the STEAM Pakistan journey and are receiving technical assistance as per protocol.

On June 7th, a meeting took place between STEAM Pakistan representatives and Ms. Hina Saleem, Regional Director at Teach For Pakistan (TFP), Sindh. The prospect of inducing 16 TFP fellows in STEAM Pakistan Partner Schools was discussed. A list of SELD schools was shared with TFP by STEAM Pakistan.

A meeting was conducted with Thar Education Alliance (TEA) on June 5th to discuss galvanising the STEM Technical Working Group's support to collaborate for a Science Festival in Umer Kot. The festival is expected to take place in August.

Communications

This section provides an overview of the development of social media communications for STEAM Pakistan. Below are the social media analytics for the month of June 2023:

Analytics for social media channels

Platform	Posts	Stories	Accounts Reached / Profile Visits / Reactions	Engagements / Impressions	Followers	Sample Post
Facebook	16	8	16,442	2,492	3,833	Link
Twitter	12	-	2,586	8,147	690	Link
Instagram	13	24	2,963	10,055	1,372	Link
LinkedIn	14	-	673	7,792	742	Link
Platform	Unique Visits		Total Visits	Hits		
Website	3,012		4,430	114,951		

Wins in discourse

STEAM Pakistan has been gaining visibility on multiple platforms which helps it gain credibility and recognition among wider audiences. In June, we observed a significant growth in followers, of nearly 50%, on LinkedIn. This growth indicates a strong interest in the programme and its activities that are shared on the platform. We will continue to leverage LinkedIn's potential to engage audiences and build meaningful professional connections within STEAM and associated circles.

STEAM Pakistan on MoFEPT Website

The communications team held detailed discussions with the IT and Media teams at MoFEPT to create a presence for STEAM Pakistan as a MoFEPT's initiative. As a result, both teams at the ministry provided their support to include STEAM Pakistan under the ministry's banner.

On the website, STEAM Pakistan is present under the following sections:

- **Initiatives:** Placed under the ministry's 'Initiatives' on the homepage as well as a designated tab on the drop-down menu.

- **Quick links:** STEAM Pakistan Schools Registration Portal that links to the schools' registration page on the website.
- **Latest news:** The press releases for STEAM Pakistan's MoU with NED University was featured under this section. Stories placed here will primarily be about the STEAM Pakistan's work in FDE schools. Details about these placements are provided in the section for media coverage.
- STEAM Pakistan's monthly reports are now published on the website. They can be accessed [here](#).
- A [customized landing page](#) for the program has been developed, that leads from the Initiatives drop down tab. It also includes a button to access the monthly report. The link from the drop down tab was previously linked to the website.

Notable follows

Influential personalities / public figureheads who have followed STEAM Pakistan in the month of June are highlighted below:

Name	Role	Organization / Entity	Profile
Laila Shabir	Founder & CEO	Girls Make Games	Link
Aanya Niaz	Social Responsibility & Impact	Amazon Web Services	Link
Sidra Jalil	Manager Outreach and Partnerships Malaysia	TikTok	Link
Ammar Majeed	Head Of Digital	Telenor	Link
Khalil Tetlay	Country Lead	BRAC International	Link
Rehan Farooqui	Director Corporate Affairs and Planning	EDOTCO Pakistan	Link
Aymen Abdullah	Talent Management Lead	Pepsi	Link
Abbas Saleem Khan	FMR Chairperson	IGDA	Link
Shabeeh Hayder	Head Of Strategic Alliances	ARY Network	Link

Fasieh Mehta	FMR Program Head	National Incubation Center	Link
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Program Management

Fortnightly review meeting

STEAM Pakistan and Malala Fund Pakistan team are scheduled for a fortnightly update each month. One meeting was held regarding this in the month of June. The meeting held on June 7 focused on brainstorming around key priority areas for year 2, pilot programs and reforms for year 2 based on consultative session findings. Next steps for the third-party MEL firm were also discussed during the meeting.

Gender audit / strategy

Based on the gender strategy and the recommendations, STEAM Pakistan is working on developing a gender action plan in June & July.

Monitoring and evaluation

MEL team will be working in the month of July to develop baseline instruments via engaging technical and subject matter experts. Before schools closed for summer break, MEL team undertook visits to two FDE schools where the in-person pilot was deployed by Science Fuse. The schools were selected by Director Academics at the Federal Directorate of Education.

STEAM Pakistan undertook an extensive exercise to compile an update against the program logframe for the year ending May 2023. A detailed update against each of the outputs and outcomes was shared with the Malala Fund team, along with evidence of each completed deliverable and a plan of action for the delayed milestones.

Monthly stocktake meeting

No stocktakes were held in the month of June.

Challenges and Mitigation Strategies

This section of the report will include critical challenges addressed during each month, 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
Significant delay in the formal signing of a Letter of Understanding in Punjab	Based on PAMS' earlier engagement with the School Education Department, STEAM Pakistan proceeded with the technical support to facilitate the STEM Clubs' PC-1.