



## **Monthly Report - July 2023**

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Prepared by:  
STEAM Policy Unit  
Ministry of Federal Education & Professional Training  
Government of Pakistan

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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 July 2023 include:

- 1,115 STEAM partner schools have signed up for the program as of 31st July. No additional schools registered during the month due to the summer break
- The Summer Fiesta was held in Gilgit Baltistan with STEAM Pakistan engaging 500+ students through astronomy focused activities including observing the sun through a filtered telescope, making and testing a sundial, and writing letters to aliens!
- The IBA Mathematics Summer Camp formally concluded with its second phase engaging 45+ government school students daily. Students finishing top 4 also received prizes.
- The Game Design workshop held on 8th July led by Girls Make Games (GMG) and facilitated by IBA Karachi was a big success among the students involved. 80 students from 4 schools participated in the interactive workshop covering various aspects of game design. The student in first place received a tablet as a prize.
- Indus School of Art and Architecture and STEAM Pakistan sponsored two gifted government school students for the IVS Summer Camp, “Artrageous”, to hone their skills over the 10-day workshop.
- Reckitt Benkiser is planning a 3-day engagement with 10 STEAM Pakistan partner government school girls spending 2 days at the plant and 1 at the head office. Activities will include interactions with women in leadership roles, workshops, and learning about their product technology. This event is scheduled for September.
- Pakistan Cables is planning a “70 at 70” campaign to celebrate their 70th anniversary through 70 Safer sessions starting 1st September.

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 – July 2023

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

### Learning

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

**1,115 Government Schools Engaged**

**63 Districts Covered**

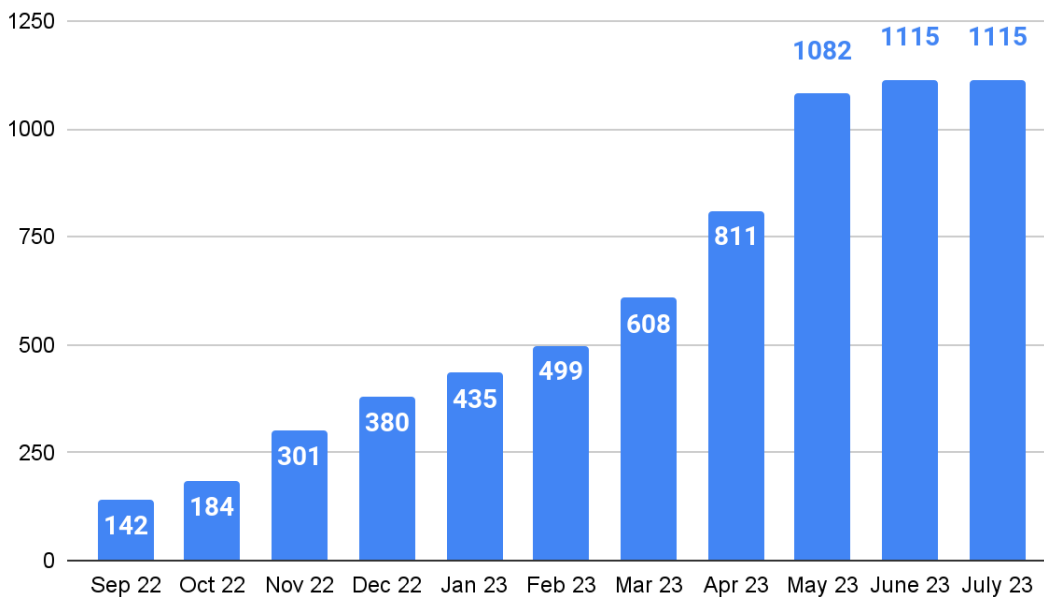
**35,474 Students Engaged**  
67% Girls, 33% Boys

**363 STEAM Clubs**

#### 1. Partner Schools’ Highlights

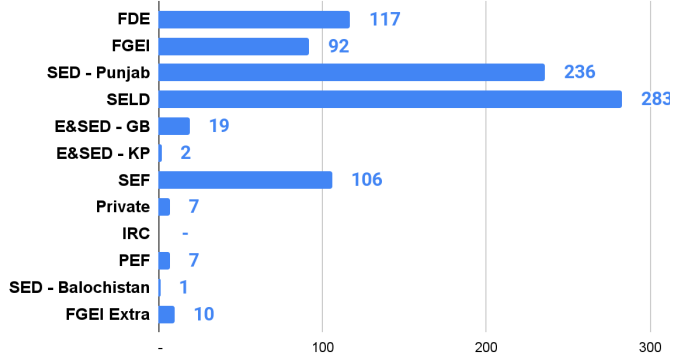
##### A. Journey to Date

No. of Schools Registered Over Time

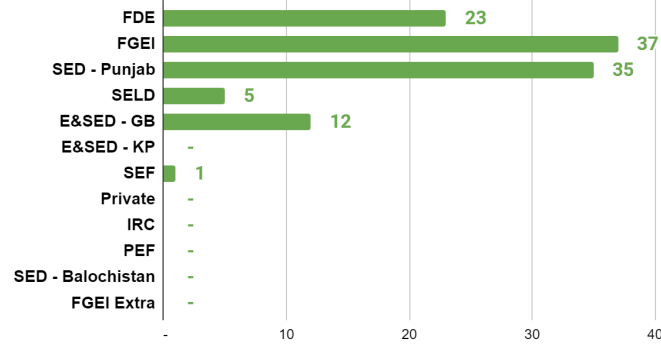


**B. Level-wise progress\***

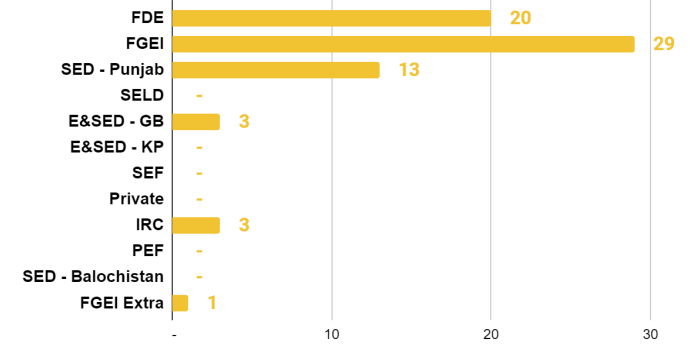
Level 1 by Institute



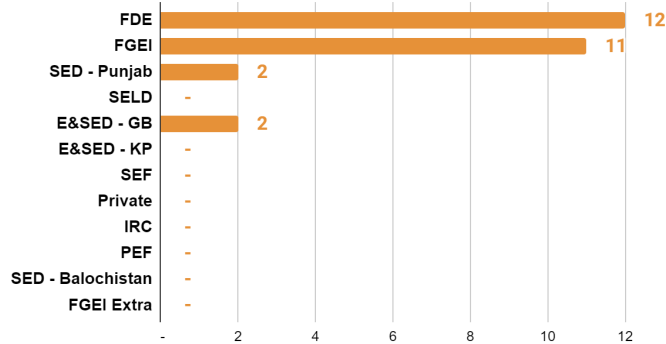
Level 2 by Institute



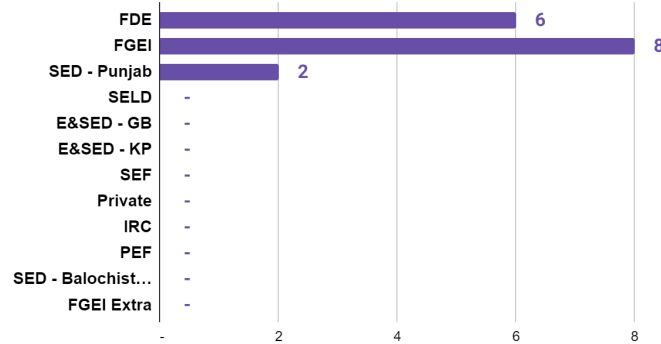
Level 3 by Institute



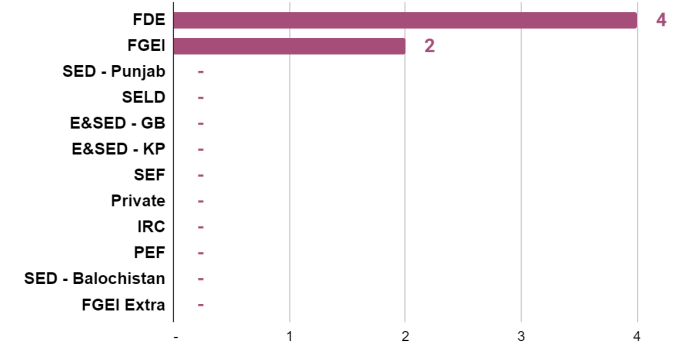
Level 4 by Institute



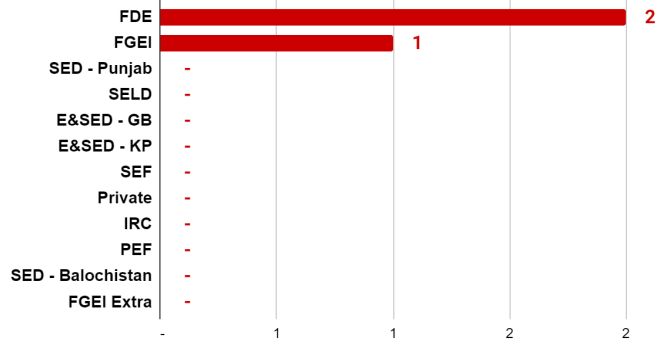
Level 5 by Institute



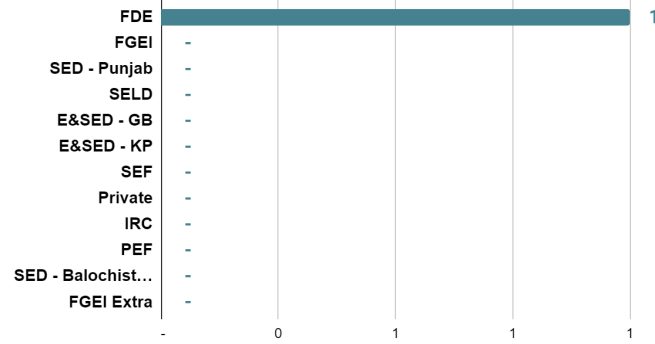
Level 6 by Institute



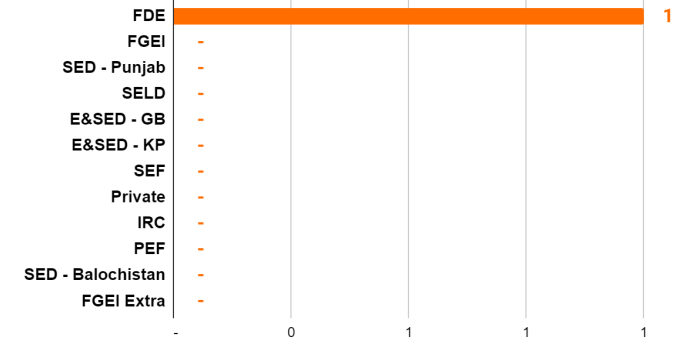
Level 7 by Institute



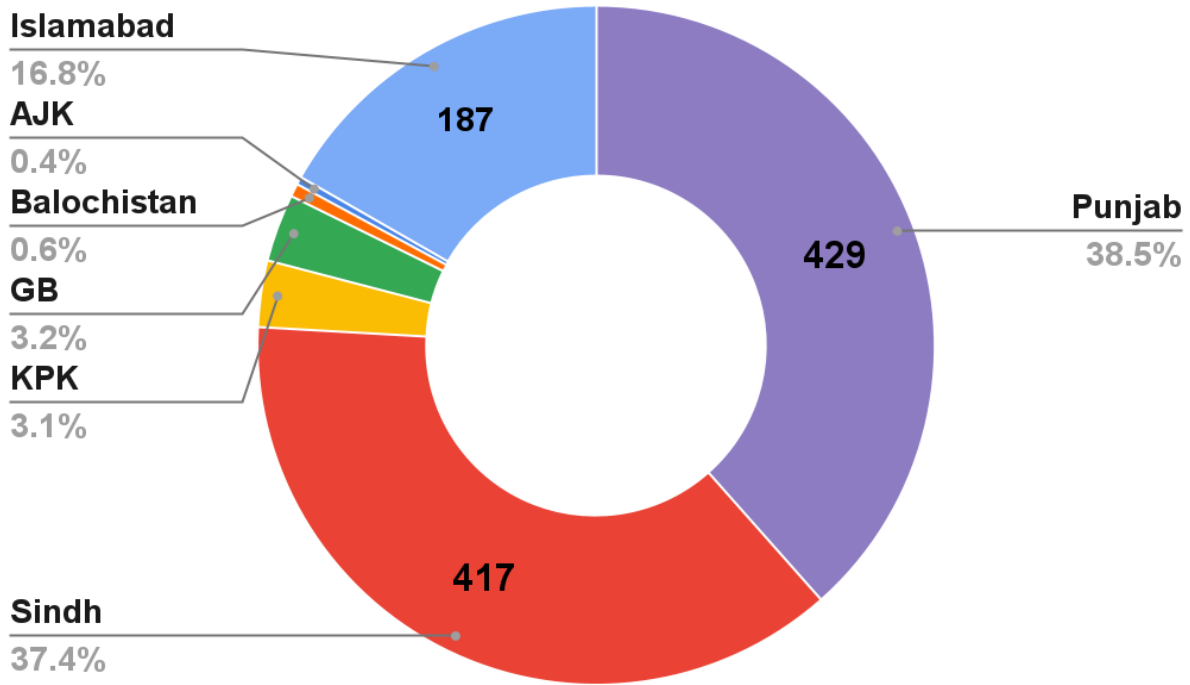
Level 8 by Institute



Level 10 by Institute

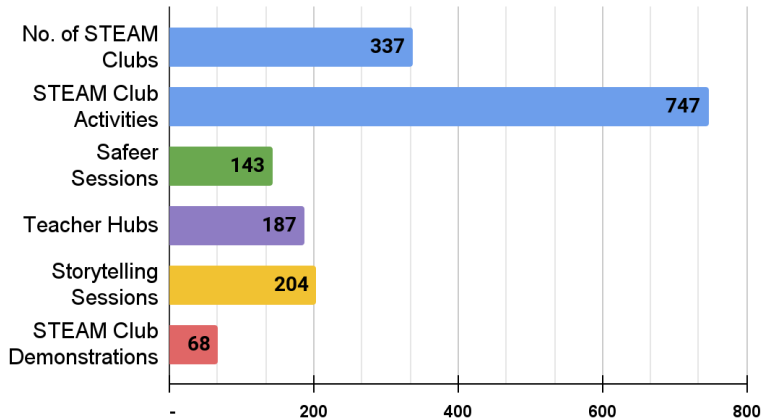


### C. Region-wise partner school distribution

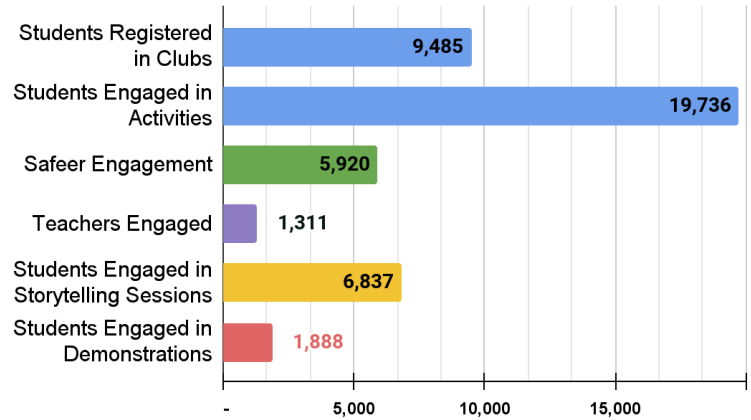


### 2. Activities in partner schools

#### 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 July 2023:

- School levels are now configured based on the new STEAM partner school journey and all data is directly accessible from the servers. This drastically reduces the time of the programme team in validating school activity reports
- Institute specific accounts/dashboard have been created
- School journey page was made more user friendly and intuitive

## 3. 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](mailto:info@mathsandscienc.pk)
- Zoom helpdesk - Tuesdays and Thursdays, 10:30 AM to 11:30 AM and 3:00 PM to 4:00 PM

Given the summer break, zoom helpdesk was paused for the month of July.

## 4. Analytics for existing video content

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

Month / Cumulative	Modules	Views	Hours Watched
July	1	554	12.2
Cumulative	35	18,041	465

## 5. Upcoming trainings / orientations

The following trainings and orientation sessions are planned for the month of August:

- Content training for teachers in FDE schools is planned for 8-10th August. The notifications for all 6 sectors can be found [here](#).



- Virtual STEAM Pakistan orientations are expected in the month of August for SEF schools, 24 JICA schools and SELD schools that registered from Central and South Karachi in the month of May. The tentative date for these sessions is 16-18th August.
- An in-person or virtual orientation will be planned for 100 FDE schools as a refresher for those that are on level 1 or 2 of the STEAM partner school journey or those which have registered and have not received an orientation previously. The dates will be finalized in August.

## 6. Additional activities

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

Activity	Description
Content development and rearrangement	<p>Whole School STEAM Activity &amp; One-day STEAM competition reporting templates finalized and translated in Urdu. Videos for the same are also in the process of development. These are expected to go live in August.</p> <p>A guide for the Whole School STEAM Activity is also being prepared which will be published on the website by August.</p> <p>Pre-existing guides on the website are currently being reviewed and will be updated in light of learnings from the first year of the programme. This is also expected to be completed by mid-August.</p>
School support	<p>The new STEAM school journey was shared with schools on 24th July. It will be reshared on the first day of the academic year for all institutions.</p> <p>Weekly refreshers will also be introduced going forward. These will be open to all. The refreshers will begin starting August.</p> <p>STEAM Pakistan team is facilitating the recording of 'Welcome back to school' voice notes by each partner institute's head to be shared in respective WhatsApp groups</p>
Lesson plans	<p>STEAM Pakistan is developing lesson plans for FDE teachers. Currently 18 plans for Mathematics and Science have been drafted which are being reviewed.</p>
Art guides	<p>10 art guides and 4 art guide videos have been finalized after STEAM team's input. The guides are part of an ongoing partnership with the non-profit, Zindagi Trust.</p>

## **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. No STEAM Safer sessions were held in the month of July on account of school closures due to vacations.

### **Newsletter**

The newsletter for June issued in July 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](http://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 Safer.

## Policy Deliverables

### Gilgit-Baltistan

#### Summer Fiesta 2023

The Summer Fiesta took place as planned from the 3rd to 13th July with STEAM Pakistan leading the sessions from 9am-1pm. The schedule for each day can be viewed [here](#). Each day started with an introduction and debriefing regarding the day's activities. This was followed by students viewing the sun through a filtered telescope. Next, they would come indoors to view and learn more about the sun through YouTube videos and engaging discussions. After that, the students were taken through a step-by-step process of making a sundial accompanied by explanations of scientific concepts involved. These sundials are also taken outside and tested by the students. Following that, students were given a career counseling session on STEAM careers, particularly space sciences. Students are also given a "sky tour" through applications that help explore space by pointing your phone towards the sky. Lastly, students write a letter to aliens which includes their depiction and a sentence in a completely new language that they come up with. These sessions engaged 500+ students over the course of the 10 days. Highlights from the event can be viewed [here](#).

#### Results' analysis presentation and review

The STEAM Pakistan team conducted an in-depth analysis of grade 5 and 8 centralized examination results which was presented to department representatives and other important stakeholders on 25th July. The notification can be accessed [here](#). The analysis revealed that students struggle significantly in core subjects like English, Mathematics, and Science. Board of Elementary Examination Gilgit Baltistan is planning to arrange a targeted teacher training for teachers of these subjects. The examination data will also be further analyzed after looking at other metrics such as strength and qualification of existing teachers. The attendance can be viewed [here](#). In addition to these members, the Director of the Baltistan Division along with four deputy directors also joined online. Pictures of the meeting can be viewed [here](#).

#### Skardu schools' focal person meet-up

The STEAM team met with the 13 focal persons of affiliated partner schools in Skardu and discussed their experience/challenges with the STEAM journey. They were also encouraged and motivated to complete the level wise tasks.

### Punjab

#### STEM PC-1

The Planning and Development Board and the Finance Department have approved the extension of the STEM PC-I. Some funds have been released and will be disbursed following the approval of the Secretary.

## Federal

### **STEM classroom observation tool for head teachers**

The team put together a draft classroom observation tool for Mathematics and Science subjects (Grade 6-8) to enable head teachers to conduct periodic evaluations. The draft tool was shared with Director Academics, 3 head teachers and 2 middle school teachers for input on content/indicators. The team is currently incorporating feedback and will be sharing a revised version in August.

### **Content training**

Based on input received from school focal persons and the FDE, content-specific trainings are being organised for selected teachers from all six sectors in Islamabad. The learning team will be conducting six in-person training sessions for 120 mathematics and science 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 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 second and final phase of the mathematics summer camp for 3 STEAM Pakistan partner government schools concluded on 21st July. This phase was aimed primarily at grades 9 and above. In addition to partner school students, STEAM Pakistan also engaged the broader community through the students participating in the first round. These students reached out to members of their communities which led to participation from students from other schools and organizations. Phase two of the camp saw engagement from 75+ students and an average daily attendance of 45 students all 9 days. The closing ceremony saw a motivational talk and information session regarding admissions and scholarships at IBA Karachi. Moreover, the top 4 students received prizes. Students also received a transport allowance upon request. Glimpses from the mathematics summer camp can be accessed [here](#).

Additionally, in collaboration with Girls Make Games (GMG), a game design workshop was conducted in IBA on 8th July. STEAM Pakistan recruited 2 technical leads from a new partner, Reality Forge Asia, 1 social media lead, 1 lead presenter and 10 facilitators for the workshop. The workshop started with an information session regarding admissions and scholarships at IBA. This was followed by a game design orientation by faculty member and entrepreneur Jawwad Farid who spoke about the various roles involved in game design. This marked the official commencement of the workshop. Students were made to do a character design activity followed by a “design-along” in which the technical leads created a video game with the help of the students which they also played. 80 students from 4 schools participated with the student coming in first place receiving a tablet as a prize. Pictures and videos from the session can be viewed [here](#). A social media reel capturing highlights can also be viewed [here](#).

#### Habib University Karachi

On 26th July, the programme was presented to Aatir Khan, a professor in Social Development and Policy and he is keen to take it forward along with the other faculty/staff. He is teaching a research seminar on education policy in the coming semester and has committed to having the programme present to his students in one of the earlier classes and then encourage them to pick research topics to explore around different aspects of the programme such as impact of

the STEAM Safer component on boys versus girls schools, change in aspirations for higher education after exposure to university engagements and so on.

The professor will also meet relevant staff from Student Life and the School of Integrated Sciences next week to push the MoU with STEAM Pakistan. However, the research collaboration will take place regardless of a MoU. Additionally, possibilities of turning some of STEAM Pakistan's policy work into senior year research projects through STEAM internships were also explored.

### **Indus Valley School of Art and Architecture (IVSAA)**

Indus School of Art and Architecture and STEAM Pakistan sponsored two government school students for the IVS Summer Camp held from the 4th of July to the 14th of July 2023. STEAM Pakistan identified 2 students gifted in the arts with the help of school focal persons, HMs, and DEO, and found an opportunity over the summer to hone their art skills through a very exciting art summer camp by IVSAA, called "Artrageous". Aasma Rafi from Government Girls Higher Secondary School Neelam Colony and Aun Ali from CMS Government Boys Higher Secondary School participated in the 10-day workshop, and were enrolled in the following courses: All About Drawing, Faces and Portraits, Acrylics and Mixed Media, and Cartoon Animations and Graphics. With their exceptional artistic abilities, Aasma and Aun were able to make the most out of their experience by fully immersing themselves in the activities and taking the time to truly learn and build up on their skills. The IVS Summer Camp was a great opportunity for government school students to enhance the way they express themselves through the language of arts. Highlights can be accessed [here](#).

### **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. For the month of July, schools and universities were closed on account of examinations or semester breaks/vacations.

## **Corporate Partnerships**

### **Pakistan Cables**

A meeting was held with Pakistan Cables on 27th July to discuss their 70th anniversary. They will be launching a "70 at 70" campaign relating to 70 STEAM Safer sessions in celebration of their 70th anniversary. These will begin from 1st September.

Moreover, the company has committed to supporting 200+ students' visits to TDF Magnificience Centre between August and October. More could follow if things go well. STEAM Pakistan will be leveraging this opportunity to reward the most active STEAM clubs. This is only applicable to Karachi schools for now.

## **Reckitt Benkiser**

An MoU is in the process of being finalized with Reckitt Benkiser. A draft was shared with STEAM Pakistan which was approved from the programme's end. The MoU is still awaiting final approval from their end. It is expected to be signed by mid-August.

Additionally, as mentioned in earlier monthly reports, the company has planned a highly engaging 3-day activity for 10 school girls from STEAM Pakistan's partner schools who will be selected through a meticulous criteria including interest in STEM, confidence, STEM related academics etc. This activity entails women in leadership roles in R&D hosting talks, workshops, fun activities, and the students some of their product technology including identifying various chemicals, stain development, workings of Gaviscon etc. The students will also receive prizes at the end. The girls will spend 2 days at the Reckitt plant in Mauripur and the final day will be at the head office in Dolmen. The activity will be taking place tentatively in September, with outreach taking place in August. Outreach support will be provided by Reckitt Benkiser's team.

## **Partnership with international organizations**

GMG led a workshop through the support of IBA and STEAM Pakistan on 8th July. More details can be found under the "IBA Karachi" section under "University Partnerships". GMG also financially supported all associated costs for the workshop.

## **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**

### **Indus Resource Center**

Nisar Science Fellowship, in partnership with Indus Resource Center (IRC) formally concluded as of 30th May 2023. As NSF's legacy, the three IRC partner schools have now been mainstreamed into the STEAM Pakistan journey and will continue to receive technical assistance as per protocol.

### **Zindagi Trust**

As part of the MoU signed with Zindagi Trust for 10 art guides and 10 complementing videos, 5 guides and 4 videos have been finalized and approved. These will be uploaded on the STEAM Pakistan portal for partner schools to benefit from and will inform other art interventions to be introduced in schools.

## Communications

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

### Strategies and branding

#### Earned media and influencer plans

Strategic plans with a focus on building visibility for activities in the context of Pakistan's market are in progress. These plans are being developed in relation to the logframe and will cater to STEAM Pakistan's programmatic requirements. A collaborative effort with Malala Fund is underway to ensure aligned, comprehensive, and effective strategies. The draft will be ready in August.

#### Branding and visibility

Co-branded collateral was developed for the programme's activities with partners that include Girls Make Games Design Workshop and IBA Mathematics Summer School, which can be viewed [here](#).

Additionally, STEAM Pakistan monthly reports are now accessible through the Ministry of Federal Education and Professional Training website. This can be viewed [here](#).

#### Communications guidelines

To establish a more cohesive presence and improve recognition and recall, the existing branding document is being expanded to encompass all mediums important for the programme's recognition.

Additionally, editorial, photographic, and video guidelines were developed for the Game Design Workshop. It can be viewed [here](#). These are extensions of STEAM Pakistan's coverage handbook that is provided to external video and photography teams for event coverage. The guidelines ensure consistency in messaging through both written content and visual media in line with the programme's requirements. These guidelines will be refined, incorporating insights from the gender strategy to ensure they are in their most effective form.

### Communications outreach

An initial discussion was held with Pakistani Women in Computing (PWIC) to align with STEAM Pakistan for creating and supporting conversations about STEAM education on social media and for conducting Safer sessions.

### Social media

July has seen strong growth on LinkedIn and Instagram, where followers have increased by 31% and 6%, and engagement 63% and 32% respectively. Moreover, STEAM Pakistan events and activities were covered on all platforms, including IBA Maths Summer Camp, Girls Make Games workshop at IBA, Gilgit-Baltistan Summer Fiesta 2023, and numerous STEAM activities



conducted within government schools. STEAM Pakistan also launched on Meta’s new social media platform, Threads, and is quickly gaining followers on it.

Below are the social media analytics for the month of July 2023:

Platform	Posts	Stories	Accounts Reached / Profile Visits / Reactions	Engagements / Impressions	Followers	New Followers	Sample Post
<a href="#">Facebook</a>	14	19	10,196	16,300	3,283	38	<a href="#">Link</a>
<a href="#">X (Twitter)</a>	21	-	3,687	21,800	736	48	<a href="#">Link</a>
<a href="#">Instagram</a>	11	37	6,592	12,900	1,412	77	<a href="#">Link</a>
<a href="#">LinkedIn</a>	15	-	199	5,723	966	227	<a href="#">Link</a>
<a href="#">Threads</a>	3	-	-	-	-	137	<a href="#">Link</a>
Platform	Unique Visits		Total Visits		Hits		
<a href="#">Website</a>	2,143		5,064		66,346		

### Notable follows

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

Name	Role	Organization / Entity	Profile
Isra Shabir	Director	Girls Make Games	<a href="#">Link</a>
Jawwad Farid	Professor, Practise	IBA SMCS	<a href="#">Link</a>
Emily G Cunningham	Marine Biologist	Royal Geographical Society	<a href="#">Link</a>
GCE-US	Official Page	Global Campaign For Education - US	<a href="#">Link</a>
GDE Series	Official Page	Game Development Essentials	<a href="#">Link</a>
Noshin Masud	Communication Expert	MoFEPT	<a href="#">Link</a>

### Driving conversations

This section covers conversations about STEAM Pakistan led by influential personalities. Below are social media posts made by such individuals in July:

Name	Role	Organization	Link to Post
Wahaj Siraj	CEO	NayaTel	<a href="#">Link</a>

### Newsletters

The following email newsletters were sent out during the month of July 2023:

Date	Type	Title	Platform	Link
18-Jul-23	Programmatic	Igniting curiosity, building dreams	Mailchimp	<a href="#">Link</a>
14-Jul-23	Thematic - STEAM Safeer	Creating pathways to resilience and empathy in girls' classrooms	Mailchimp	<a href="#">Link</a>

### Additional activities

- A digital certificate is being developed for schools reaching level 5 and level 10
- A celebratory template is being created for schools progressing levels to be shared over WhatsApp

## Program Management

### Fortnightly review meeting

STEAM Pakistan and Malala Fund Pakistan team are scheduled for a fortnightly update each month. One meeting was held on 6th July. Following next steps were identified:

- Focus on developing an education manifesto/roadmap for political parties, including a 7-point educational agenda for the Prime Minister
- Schedule a briefing session with development partners
- Follow-up with the Secretary MoFEPT regarding Learning (Delivery) Unit
- Propose inclusion of STEAM in an upcoming Inter Provincial Education Ministers' Conference (IPEMC) or Secretaries' Committees.
- Follow-up meeting to be held to discuss strategy for Sindh / SE&LD, including request for stocktake.
- PAMS to propose ways in which Taleemabad's intervention can be leveraged to benefit the roll-out of the STEAM program in ICT
- PAMS to devise plan for Head Teachers' engagement in STEAM Pakistan

### Meeting with Secretary, MoFEPT

The STEAM Pakistan team met with the Secretary, MoFEPT on 21st July 2023. Following agenda items were discussed during the meeting:

- Malala Fund's interest in supporting the Learning Unit, particularly the link of foundational learning with life-long learning and grade appropriate learning skills
- The Secretary showed heightened interest in arranging celebrity storytelling sessions in Islamabad government schools
- Engagement of head teachers as part of STEAM Pakistan was discussed along with FDE's interest and agreement in the proposed plan of engaging head teachers as core stakeholders
- The Secretary agreed to put STEAM as an agenda item for the upcoming Inter Provincial Education Secretaries' Committee meeting

### Letter of Understanding (Punjab)

The LoU was shared with the Law and Parliamentary Affairs Department, Government of Punjab on 7th July which was also followed up on later. The LoU is now being processed.

### Gender audit / strategy

Based on the gender strategy and the recommendations, STEAM Pakistan is working on developing a gender action plan. The first draft of the action plan will be shared with respective audience groups in August.

## Monitoring and evaluation

The external MEL team utilised the month of July to develop baseline instruments via engaging technical and subject matter experts. These will be shared with the STEAM Pakistan team on 9th August. After approval, a pilot study will take place in 4 Islamabad schools on 16th August. Finally, the baseline study is scheduled for 29th August.

## Head teacher engagement

STEAM Pakistan is currently devising a mechanism for operationalising regular engagement protocol and process for head teachers of the partner schools. This section will provide updates on progress made on this front.

## Monthly stocktake meeting

**Federal:** No stocktake was held in the month of July.

**Sindh:** STEM Policy Unit in Sindh is scheduled to have its first stocktake on 17th August 2023.

## 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
Owing to the current political conditions in Punjab, there is lack of political ownership of the project	The program intends to operate in a nonpartisan and non-political mode until the announcement of General Elections, followed by an elected government.
Significant delay in communication content (post-production) by the external communications team	Senior management of the vendor was engaged to embed QA systems and to fasttrack the pending deliverables.