

# Excellence Beyond Borders!

---

## *UPSIGN delivers STEM Teacher Training for Affiliated Colleges of Quaid-e-Azam University, Islamabad, Pakistan*

---

**Introduction & Background:** UPSIGN and Quaid-e-Azam University (QAU) joined forces in response to a QAU project funded by the British Council (BC) to design and deliver a one-week workshop to 44 faculty members of QAU's affiliate colleges in August 2022. The main objectives were to give them the essential skills to teach STEM subjects through Evidence-Based methods. Delegates learnt how to a) engage students in active classroom learning using practical tools/strategies; b) encourage their students to think like experts in their fields; c) adopt inclusive STEM teaching methods to encourage more female students; and d) gain some practical hand on experience of modern laboratories and equipment (supported by leading QAU academics). [Click here to watch the video!](#)

To develop the taught elements of the workshop, UPSIGN initially consulted widely with its diaspora network and key stakeholders in the country, to better understand the challenges faced by STEM educators in Pakistan (as we wanted the content to suit the Pakistani context). The content was carefully developed by a small UPSIGN team and QAU lead Dr Hazir Ullah.

**5 Days, 5 Themes:** The STEM training programme was broken down into five thematic areas starting from understanding basics of Learning Theories and the barriers that learners face in their learning environments. As days progressed, participants took a deep dive into STEM teaching and assessments methods, using Problem Based Learning, making teaching relevant to real world problems, creating safe inclusive classrooms, practising our listening skills, and understanding what inclusion looks like in the real world. We used a variety of teaching methods including lecture style sessions, group tasks, individual reflections, paired conversations, and panel discussions.



**Digital Platform:** Alongside face-to-face delivery, we set up a Virtual Learning Environment using Google Classrooms where resources were published including slides, reading materials, instructions for group tasks, and a Community of Practice to share best practice, and knowledge. This was an important part of the project for the UPSIGN team to provide ongoing support and guidance to delegates.

**STEM Teaching Model:** The week culminated into the Final Day Presentations where all delegates presented a STEM Teaching Model using the techniques taught throughout the week. The energy and enthusiasm from delegates were amazing, they were keen to experiment, and eager to engage in the learning process. UPSIGN team gave detailed feedback on their presentations, highlighting use of Problem Based Learning, and identifying areas for further development.



**Feedback from delegates:** The training programme was very well received and the feedback in terms of organisation, content and design was very positive indeed. Key highlights:

- Quality of content, design, and delivery: **4.9/ 5.0-star rating**
- Knowledge increase before & after: Increase from 2.3/ 5.0 to **4.8/ 5.0-star rating**
- Experience of Group Work & Presentations of STEM model: **4.7/5.0-star rating**

Delegates shared their desire to engage in more interactive learning opportunities in future and praised the professionalism and expertise of the UPSIGN and QAU team. A selection of quotes from attendees:

- *“I personally feel change in my activity and my teaching. I enjoy while teaching and I remember all the methods which I learnt in workshop”*
- *“Today along with other things in my class, I took care of time management too. Today my teaching method was different”*
- *“I started my day in college with great spirit and I applied the techniques and skills, which I learnt from all of you”*
- *“It was an excellent event well managed with an excellent delivery”*
- *“Workshop was very good, and I think in future, the workshop should be for more days”*

**What's next?** UPSIGN has now validated that the workshop is fit for purpose in Pakistan and with some minor tweaks, we will now seek to deliver this to the next scale. We are already in discussions with local stakeholders including the HEC to clarify how UPSIGN can scale up this activity via the establishment of local master trainers from leading universities such as QAU, who want to deliver this essential training to their affiliated colleges of which there are over 300 presently across Pakistan.

**Acknowledgements:** UPSIGN wishes to thank, Dr Hazir Ullah (the Principal Investigator of the funding from British Council) and his Logistics & Support team. We also wish to thank British Council for funding QAU. UPSIGN is also acknowledged for funding one of the trainers from its own charitable funds. We would also like to give special thanks to QAU Vice Chancellor Dr Muhammad Ali, Dr Mukhtar Ahmed (HEC Chair), Sarah Pervez and Dr Nishat Riaz (British Council) for endorsing the project and by their presence at the opening ceremony. Finally, I would like to thank the UPSIGN team (Dr Adeela Shafi, Prof Jawwad Darr, Noshaba Ambreen, Dr Sajid Saleem), and the wonderful group of delegates who attended!

*Written by Madiha Sajid*

