



GenSTEM

"Let's work together in driving the change towards quality education"



Members

- Brisa Maneechotesuwan: *Co-Founder/Project Executive*
- Praeploy Nakmai: *Co-Founder/Head of Outreach*
- Apisara Panichyanont: *Head of Marketing*
- Theerada Chevaphatrakul: *Outreach Department*
- Malissa Saengtubtim: *Co-Founder/Project Executive*
- Chawisa Vongsuly: *Columnist Coordinator*
- Pakpume Tatiyaapitham: *Finance Director*

What We Did

Hands-on Workshops - GenSTEM emphasises in teaching STEM through practical implementations and project based learning

- **Volcano WorkShop @Khleng Toei** - A blend of STEM and Art. Taught about chemical reactions, geology etc. students got to learn through designing their own volcano replicas using household ingredients.
- **Rocket Workshop @Khleng Toei** - Exploring concepts in physics and applying their knowledge into rocket building and design.
- **MathsForFun @Baan Hathai Rak** - Providing educational support to orphans by engaging them through a series of enriching math activities that will enhance their problem-solving skills and better visualize concepts.
- **Virtual Science Workshop @Amnuay Silpa** - Conducted engaging STEM experiments and taught interesting science concepts behind them to students at ANS - part of our "Feed Forward Initiative" where the money received from this workshop was donated to our STEMBOX project.
- **SongKran Math Tutoring @BKKPREP** - Hosted a math tutoring session, in partner with Bangkok Prep Academic prefects, to help students develop their math skills through essential tips and support.



Impact & Accomplishments

- 4000+ hours worked as a team
- 4 GenSTEM chapters established across Thailand
- 60+ volunteers
- 1700+ students impacted from STEMBOX project
- Workshop impacts 60+
- Social media 509 Followers / 10,564 Impressions / 9006 reach / 2171 Likes
- Total impact : 10,807 people
- Received 100,000฿ MGOLD sponsorship
- Raised 39,000฿ from donations
- Received 5000 ฿ in partner with Stertex to fund our STEMBOX project

★ Our impact can be measured through the feedback from our resources, google evaluation forms & number of people reached (qualitative and quantitative measurement)

Introduction to GenSTEM

GenSTEM is a youth-led organization aiming to increase access to quality STEM education for youth in underserved communities all over Thailand.



Our Mission

- **Hands-on Workshops:** to expose students to more STEM opportunities with the basis in promoting critical thinking, innovative skills and foster lifelong learning.
- **Raise awareness:** shed light on prevalent educational issues and inspire the audience to delve deeper into the world of STEM.
- **Youth empowerment:** recruit passionate youth to become volunteers and prompt engagement in STEM in youths across all socioeconomic groups.
- **Resources support:** providing educational supplies to enhance learning and facilitate rural schools.

Raise Awareness

GenSTEM has an extensive social media presence where updates and visual, succinct blogs are posted. With topics ranging from advances in science such as CRISPR-Cas9 gene-editing technology, notable STEM figures and current educational issues in Thailand. Whilst our posts hope to increase scientific literacy across Thai youths.

Youth Empowerment

From GenSTEM's December application, we managed to gain volunteers from all over Thailand. GenSTEM wants volunteers to apply their passions and skills in areas of interest to better the lives of students in poor communities. Volunteers were encouraged to exchange ideas, collaborate with like-minded youth in the team in researching and designing workshops, learning schemes and educational resources. Through fostering a community of youth volunteers, GenSTEM can amplify and sustain its impact.

Difficulties & How We Overcame Them

- Due to COVID-19, we were unable to host planned workshops - resulted in online methods and initiated the STEMBOX project to reach out and support more students.
- New to hosting workshops: no prior experience - continuously corrected and improved from each events' flaws through evaluation, which increased the effectiveness of our workshops.
- Coming up with impressive project ideas - team discussion/brainstorming session.
- Communication with organizations - initiated an outreach team.
- Reaching out to corporations and gaining their attention for sponsorships - consulted people in the business field on creating professional presentations.
- Planning multiple events simultaneously - effective delegation and setting SMART targets.

What We Learned & Skills Acquired

GenSTEM is grateful for the opportunities pursuing this project has brought and for the invaluable skills learned along the way.

Since the very first day we've visited the Khlong Toei slums and seen how much education the children there are lacking, which fueled us to take action ... to now, where we've successfully conducted multiple events through youth-led efforts, it has taught us a lot. We learned that with passion, teamwork and the power of youth, anything is possible. We're able to create impacts way bigger than ourselves with collaboration between like-minded youth motivated to make a difference in society. Furthermore, delegating tasks to a large volunteer team has definitely allowed us to enhance our leadership skills. We've learned how to communicate effectively to our members and through many events of public speaking and presentation to students, sponsors, etc. Additionally, due to a number of setbacks, we gained the skills to adapt and become flexible to the inevitable changes beforehand whilst allowing us to gain perseverance skills in working hard to overcome challenges.

A lot of patience and understanding had to be demonstrated when teaching children in our workshops, in ensuring that students can develop at their own pace. After every workshop, we've learnt to appreciate teachers more, as there must be a lot of effort put into lessons!

Along with that, these experiences enabled us to grow much more and has increased everyone's realisation for the importance of STEM and quality education than ever before. We realize that GenSTEM's persistent efforts in striving to better the lives of children will one day enable us to meet the goal of quality education for all.



Special Mention & Thank You

- **Ms. Alison Cantrill** - offering advice and opinions on how to improve the effectiveness of our workshops, how we can expand our impact through various platforms e.g. social media, support in execution of GenSTEM's projects and many more.
- **Ms. Kornmada Piriyaikartsakul** - gave tips about making professional sponsor presentations and creating sustainable business models (which can be applied to GenSTEM)

"Thank you for giving the children a great opportunity to learn through fun and enjoyable activities." (translated) - *Kru Dao, Head Teacher at Khlong Toei School*

"They've developed several sustainable partnerships throughout the project, via fundraising initiatives and youth teaching youth networks. In fact, sustainability has been at the heart of the project since day one. Giving children, their parents and the schools the tools needed to develop STEM education in marginalized communities." *Alison Cantrill, Project Advisor*



Resources Support

STEMBOX Season 1 - a learning media allowing underprivileged students to access and utilize high quality STEM resources. Consisting of various academic worksheets and STEM Kits, it aims to provide students with scientific knowledge in which they can adapt to use in real life and promote independent learning. The boxes were distributed to over 20 rural schools across all 4 regions of Thailand.

Sustainability

- **Setting goals & Evaluation** - we interview members after each event and produce evaluation forms for teachers & participants to fill in - this offers us feedback to improve certain aspects for future projects. And in each workshop we set clear objectives (e.g. SMART targets, action plan) and conducted comprehensive research → Ensures sustainable outcomes and that students can receive the best quality teaching.
- **Weekly meetings** - the project management team discuss upcoming events, share ideas about what our next steps should be & plan delegation to volunteer groups etc. → Keeps GenSTEM on track and heading in the right direction.
- **Funding** - GenSTEM has conducted multiple sponsorship proposals (connecting with organizations that have aligning goals of promoting STEM education), opened up donations & secured partnerships → Funds allow us to sustain our projects and continue to invest in resources.

Partnerships

- Bangkok Preparatory and Secondary International School
- Amornrat Gems
- MGOLD
- Stertex

Future Projects

- **Tiw Hai Nong Project (ทิวไห่ฮ่อง)** - a program that connects tutor volunteers with underprivileged students to offer remote learning opportunities by teaching STEM online - 100+ impact
- **STEMBOX Season 2** - 2000+ Impact
- **Engineering Fair @KhlongToey** - 50+ impact
- **Science With Sustainability** - Asylum Seekers - 30+ impact
- **GenSTEMXGirlsCoding @BKK** - 50+ impact
- **Robotics Workshop @Chiangmai** - 20+ impact



"I thoroughly enjoyed the maths workshop and learned a lot, please come back to host more workshops for us!" (translated) - *Fah from MathForFun Workshop*