Implementation of Translational Research (TR) into Transnational Education (TNE) involving Environmental Water Ecosystem

www.uclanchina-tr-to-tne.net

University of Lancashire, Preston, UK; Tianjin University, China

Funded by BRITISH COUNCIL | China

Project Description

The project focused on implementing our established collaborative research work between University of Lancashire, UK and mainland China Universities towards field study and transform to transnational education (TNE) via new collaboration with Tianjin University who is in the forefront of cleaner production of water eco-system and environmental planning/management.

Major Achievements

- 4 high impact joint research papers of impact factor ranging froom 10-14
- One international chemical policy workshops in the UK and one public engagement event in Tianjin University involving British Council members, industrial researchers, Government policymakers, and the general public.
- Hosted skills development program by providing training on health & safety in the chemical laboratory, analytical techniques, and nanocomposite synthesis to exchange students and staff.
- UK project lead examined a PhD student from Tianjin University, April 2024
- Facilitated a summer internship program for undergraduates to develop nanomaterials and analytical skills, funded by the Royal Society of Chemistry, UK
- Staff/Student exchanges as a part of mobility program
- Presented our activity at Burlington Consensus 3, London as a part of capacity building, organized by the United Nations under OEWG-3, formed by the Royal Society of Chemistry, UK

Feedback on British Council's support

- The British Council's support was invaluable throughout the project. The staff in the British Council office in India was always available to assist with any queries, providing timely and effective help whenever needed.
- We are grateful for sending Mr Chen Zhao, Head of South Asian British Council for opening our workshop in China on April 2024 and all the other staff members for their continued timely support.

Total Number of Faculty Exchanges

Total 8 (UK to China 4; China to UK 2)
UK project Lead Dr Tapas Sen [April'24, Sept'24,Sept'25
UK Research Assistant (Joint PhD student) Faryal Mehr April'24
China project Lead Prof Mao Guzhou, (July 2024)
China PhD student, Miss Li Yihan (Nov'24)

Total Number of Student Exchanges

Total 2 (UK to China and China to UK)
Faryal Mehr (April 2024) Li Yihan (Nov'24)

Total Number of Joint Research Outcomes

Total 4: High-impact Peer-Review journal articles 4
https://doi.org/10.1016/j.cej.2024.155070
https://doi.org/10.1016/j.enconman.2024.118996
https://www.sciencedirect.com/science/article/pii/S2213343725014939
https://www.sciencedirect.com/science/article/abs/pii/S0043135425017531

Total Number of Audience Reach

Worldwide more than 10000
via the project website: www.uclanchina-tr-to-tne.net
More than 2000 via online and face-to-face delivery of 2 chemical policy workshops, 1 project workshop, and conference presentations

Total Number of Transnational education Initiatives (Joint Programme / Joint institute

Total 7 (2 joint research seminars, 2 international workshops, 2 laboratory trainings, 1 joint module delivery via an online platform)

Project Video Links

1st International policy workshop, Tianjin, China, April 2024
https://www.linkedin.com/feed/update/urn:li:activity:7190806025287950336/?originTrackingId=huFs%2Fp3iS1qghX4Il6nVAg%3D%3D

2nd International policy workshop in Uclan, Preston, UK
https://www.youtube.com/watch?v=h8b0M5sI3Vc
https://www.youtube.com/watch?v=OGWSWr1v_rE
Panel discussion:
https://www.linkedin.com/feed/update/urn:li:activity:7209594257026727936/?originTrackingId=8dQyKnpwQVuN0hkG3Lb4aQ%3D%3D
Outreach event, June 24:
https://www.linkedin.com/feed/update/urn:li:activity:7209594257026727936/?originTrackingId=8dQyKnpwQVuN0hkG3Lb4aQ%3D%3D

Innovative Aspects

- Translational research (TR) into Transnational Education (TNE)
- Model for sustainable education involving research into curriculum
- Online platform for students/staff engagement with minimum travel for environmental sustainability
- Multidisciplinary approach of teaching involving capacity building via skill development, training and dissemination

Key Lessons Learnt

- International collaboration is essential for solving global health & environmental issues via joint research and knowledge exchange
- Cross-disciplinary approaches are important for tackling complex issues
- Training workshops and hands-on sessions enhance skills development for next-generation scientists
- Outreach to young students, teachers, and the general public is the key to public-funded projects
- Proper risk assessment is essential for meeting project goals and timeline
- Difference in Quality Assurance (QA) during module and course development for binational or international students

List of Significant Activities

- Development of TNE activity via online joint module delivery, students exchange, laboratory training, analytical skills development, and planning for course development.
- Joint PhD supervision and module delivery
- 4 high-impact Peer-Review journal articles (impact factors 10 to 14)
- Outreach to the general public, young students, and teachers via Science Festivals
- 2 international chemical policy workshops, one in China and one in the UK involving academic and industrial researchers, British Council members, Government agencies, and the General public.
- Examined 1 PhD student supervised 2 PhD students, 1 in UK, 1 in China
- Skills development, knowledge exchange, and capacity building under the United Nations OEWG-3, established by the Royal Society of Chemistry.
- engagement with the wider community and policy makers

Testimonials from Participants

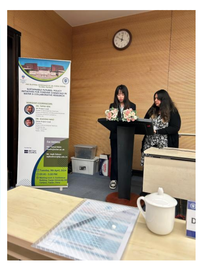
"My visiting experience at UCLan as part of this project has been incredibly rewarding. It has greatly expanded my knowledge and skills. I am grateful for the support and guidance from the team."
– Yihan Li, China

"As a joint PhD student and working as a research assistant, this project has helped me to upskill my personal development on multitasking by conducting research, providing training, international networking, overseas travelling and administration duties."
– Faryal Mehr, UK

"As an undergraduate student at UCLan, I had the opportunity to join this project as a summer intern, where I learned valuable analytical techniques, which greatly enhanced my research skills."
– Ashley Jane Maude, UK

Project Pictures









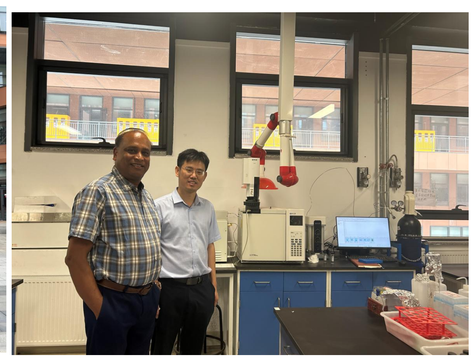


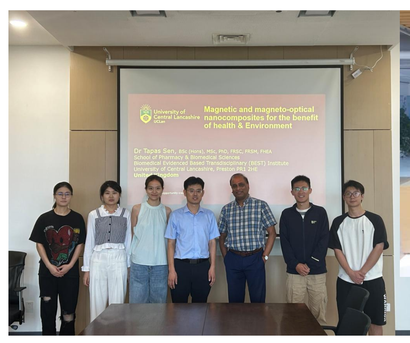






















What are the benefits and impacts your project has brought to both the UK and China?

1. Transnational Educational activities involving UK and Chinese UG and PG students
2. Mutual learning the Quality Assurance by both UK and Chinese institutions
3. Collaborating with industrial organisations such as Feedwater Ltd., both UK and Chinese universities gained the industrial need to course and module development.
4. Bringing new partnership with 4Es Scientific, China on cost-efficient magnetic separation kits for students learning, helped both UK and Chinese universities.
5. Capacity building: Skill development, Training analytical techniques, Health-Safety and risk assessment training, knowledge transfer via online lectures to UG-PG students and early-career researchers (ECR), both in the UK and China *via* people mobility. This activity has been selected as part of a building project for the United Nations Environmental Programme (UNEP) by OEWG-3
6. Chemical Policy work: Public awareness through two policy workshops, one at Tianjin University, China (9th April 2024), and the second one in the UK (3rd July 2024) that brought together policymakers, industry leaders, academics, and UN representatives to address SDG 6. Public awareness was further amplified when UK Project Lead Dr Sen's comments on "Forever Chemicals" were published in UK (The Independent, Daily Mirror, Wales Online) and European (Irish News) newspapers in April 2024.
7. Direct Contribution to the Going Global Partnership award where this project with Tianjin University amplified to our past project with East China University of Science & Technology (ECUST), China. Therefore, University of Lancashire placed in Global research and educational audience as a key player.