



Connected Learning for STEM (CL4STEM)

Research Fellowships

1. Introduction

Connected Learning for Teacher Capacity Building in STEM (CL4STEM) is a project that aims to adapt and pilot the CLix-TPD approach pioneered by Tata Institute of Social Sciences, Mumbai (<https://clix.tiss.edu> and tissx.tiss.edu) in Bhutan, Tanzania and Nigeria. It involves developing Technological Pedagogical Content Knowledge (TPACK) and strategies for inclusion for the newly qualified middle and secondary school teachers (NQT) and wherever possible for initial teacher education (ITE) in teaching mathematics and science. It enables this through the use of high quality locally relevant OERs by these teachers and by building the capacity of the faculties of education and science to select, curate and adapt OERs and integrate these into the teacher education curriculum. CL4STEM is being funded by the International Development Research Centre, Canada (IDRC). Centre for Applied Sciences and Technology Research, Ibrahim Badamasi Babangida University, Lapai (IBBUL), Nigeria is the lead partner of the consortium to implement this project; Samtse College of Education, Bhutan (SCE) and Open University, Tanzania (OUT) are project partners; and the Tata Institute of Social Sciences, India (TISS) is the technical consultant for this project.

The project consists of four interrelated activities including two research studies.

- a) Pilot an adoption and adaptation of the CLix program developed by TISS for Bhutan, Tanzania, and Nigeria.
- b) Impact study to assess the impact of the use of OERs to build teacher capacities of secondary school science and mathematics in each of the partner countries.
- c) Innovation diffusion study to assess the uptake of this innovation among the key stakeholders in the respective countries and the pathways to scaling the innovation.
- d) Knowledge Dissemination of the insights from deployment and research of this project.

2. Research fellowships

With a view to build research capacity in education and encourage greater interaction among education researchers within the global south CL4STEM plans to offer six research fellowships for duration of two years. These are open to doctoral students, post-doctoral students or early career faculty, with an interest in digital technology in education; teacher professional development; science and mathematics education; education policy; educational change; and comparative education in the global south. The research fellows will be jointly appointed by each partner country and TISS--with two fellows for each country.

1. IBBUL-TISS research fellowships: 2
2. SCE-TISS research fellowships: 2
3. OUT-TISS research fellowships: 2

The research fellows are expected to participate in the design, execution, analysis and writing of the impact study and the innovation diffusion study and support the CL4STEM project over a two year period. The fellows will be jointly mentored by faculty from both countries.

	Recruiting Institution	Research*	Affiliation: Location
SCE-TISS CL4STEM research fellowships administered by Samtse College, Bhutan			
1	SCE	Impact study -Bhutan	TISS Mumbai, India
2	SCE	Innovation diffusion study - Bhutan	SCE, Samtse, Bhutan
OUT-TISS CL4STEM research fellowships, administered by Open University of Tanzania			
3	OUT	Impact study - Tanzania	TISS Mumbai, India
4	OUT	Innovation diffusion study - Tanzania	OUT Dar es Salaam, Tanzania
IBBU-TISS CL4STEM research fellowships, administered by Ibrahim Badamasi Babangida University, Lapai			
5	IBBUL	Impact study - Nigeria	TISS Mumbai, India
6	IBBUL	Innovation diffusion study -Nigeria	IBBUL Laipai, Nigeria

* While the research fellows would be assigned to a research study, it is expected that they participate in all research related activities of the project.

3. Responsibilities

- Participate in the conceptualization of the research design workshops for impact study and innovation diffusion study. Participate in the development of common data collection tools.
- Train and support country project teams in country specific research design and customization of data collection tools for impact study research and innovation diffusion research.
- Support country project teams in data collection, analysis, and reporting of impact study and TISS for innovation diffusion study.
- Participate in data collection, analysis and reporting of the impact study and innovation diffusion study.
- Author working papers, research briefs, policy briefs, best practices etc. for knowledge dissemination.

4. Who can apply

The research fellowships are open to candidates fulfilling the following qualifications

(a) Doctoral students:

- Must have a master's degree in education/social sciences combined with a postgraduate / graduate degree in science/ mathematics / engineering or in similar fields
- Must satisfy the doctoral programme admission criteria as specified by the affiliating university.

- The candidates who are already admitted into the doctoral programmes of the partnering institutions will be preferred.
- The candidate will be expected to pursue their doctoral research in the theme aligned to the objectives and scope of CL4STEM. They will be supervised by the lead investigators of the project in respective countries or by any other researcher identified by the lead researchers.

(b) Postdoctoral candidates and early career researchers

- Postdoctoral scholars should have completed or be in the final stages of submitting their PhD (in Education or allied fields),
- Early career teacher educators from the participating institutions would be preferred.
- Should have experience in conducting academic research; strong quantitative and qualitative data analysis skills; and experience in authoring academic research reports.
- Should have a good understanding of curriculum design and pedagogies of school science and math education and understanding of the use of ICT in school education, or in policy studies, educational change, professional development and comparative education.
- Ability to handle tasks independently and meet deadlines.
- Should have good communication and writing skills in English. Knowledge and skills of the local languages of Bhutan, Nigeria and Tanzania will be an asset.

5. Terms of the fellowship

- Research fellows for Bhutan, Tanzania and Nigeria would be hired by SCE-RUB, OUT and IBBUL respectively. Selections of candidates will be done jointly by TISS and the recruiting institution. They would jointly report to research managers at their recruiting institution and research managers at TISS.
- In case of early career faculty, the recruiting institution may require the research fellow to pursue formal degree or diploma courses as a component of this fellowship for a sustainable capacity building in the realization of national ICT in education strategy.
- Recruiting institutions may set further conditions for early career faculty selected as research fellows to align with teacher service conditions in their countries and to ensure that their capacity building adequately contributes to the national ICT in education goals.
- Research fellows will be paid a stipend equivalent of USD 750 per month in local currency (fixed based on exchange rates at the time of appointment). Attempts would be made to protect the current salary of early career researchers.
- The duration of this fellowship is for a duration of two years or till 30 September 2023 whichever is earlier. In case the fellow is unable to continue for any reason, they will be expected to refund the amount of the fellowship.
- Costs towards fee and any institutional charges in the case of doctoral or postdoctoral appointments will be met by the selected scholar from the fellowship amount.
- Research fellows may be required to travel to project sites within the home country, and between office locations of SCE-RUB, OUT, IBBUL and TISS. Reasonable expenses (airfares, visa,

health and travel insurance, and other incidental expenses during travel) would be paid at cost for travel within the home country and to the partner countries. Lodging, boarding, and local travel expenses will have to be met by the research fellow from within this fellowship amount. Partner countries will arrange for campus based residence at reasonable costs.

- Research fellows would not engage in any other employment or activities during the fellowship. However, doctoral students and early career teacher educators from recruiting institutions and TISS can continue to engage in their research and /or teaching in allied areas with prior approval not exceeding 50% of their time.

6. Application timeline

- Date of the call: 1 Nov 2021
- Receipt of applications: 15 Nov 2021
- Tentative week for interviews: 22 Nov 2021
- Date of joining: 15 December 2021

7. Application process

- TISS will be the receiving institution for all applications. Applicants would send their CV, along with a cover letter, a statement of purpose, and two letters of recommendations attesting to their suitability for these positions by email to vijay.jathore@tiss.edu by the due date.
- A shortlist of candidates would be prepared jointly by a committee with representatives from the recruiting institution and TISS.
- An interview panel composed of representatives from the recruiting institution and TISS would jointly conduct selection interviews for the candidates applying for positions in respective countries.
- The lead investigators from the recruiting country and TISS would make the final selection of the candidates from the shortlist provided by the interview committee. Attempt would be made to recruit one doctoral student/post-doctoral fellow/ early career researcher each from the recruiting institution and TISS for each country.
- Appointment letters to the selected candidates would be issued by the recruiting institution. The monthly stipend will be directly deposited to the research fellow's account by the recruiting institution. All reimbursements in the course of recruitment will be paid by the recruiting institution.
- Research fellows would be jointly supervised by the lead investigator of the recruiting country and the lead investigator of TISS CL4STEM project or by any other researcher identified by them.

