

Thanks to DBT, Indian students could soon be carrying microscopes in pockets

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Undergraduate students from all parts of the country will soon be able to take a peek through a microscope that they can carry with them, following an initiative by the DBT to reach the Prakash Lab's low cost paper folding-microscope, the Foldscope to students in our country.

The letter of intent to distribute Foldscope through DBT's star college and other programmes was exchanged between the DBT and the Prakash Lab in the presence of Prime Minister, Mr Narendra Modi during his visit to Silicon Valley in USA recently.

The 'Foldscope' has been developed by Dr Manu Prakash, an Indian-origin Assistant Professor at Stanford University.

It all started with a tweet from secretary, DBT, Dr K Vijay Raghavan to Dr Prakash on August 12, 2015. 'Hi, can we discuss using Foldscope widely in India? I am at the Dept of Biotech, Govt of India,' Dr Raghavan had tweeted.

Dr Prakash responded immediately welcoming it, a skype call followed subsequently. Prime Minister's office also responded

enthusiastically to the call requesting for his support.

Rapid communication through the social media played a crucial role quickly paving the pathway for the letter of intent to spread the low technology widely through DBT's network. This was a unique demonstration of how the government is using the social media in novel ways to stimulate citizen science.

Dr Prakash is excited about engaging through DBT to extend further the Foldscope's reach to all parts of India. He said, "Our vision is to bring a microscope into the hands of every single kid in the world".

"Partnering with Prakash Lab's Foldscope is an exciting new adventure for the Department of Biotechnology. It is Citizen Science at its best. The Foldscope is torchlight in the hands of human curiosity that allows each and every one of us to explore our planet at the microscopic level, just as the telescope allows us to explore the stars. The beauty we see and the science underneath it will create a new generation of young scientists in India. We look forward to taking this wonderful partnership ahead" said Dr Vijay Raghavan.

Prakash Lab, a research group at Stanford University working in the field of engineering and physical biology, will source Foldscope to DBT and its constituents.

The DBT says it will ensure that the Foldscope is provided to students of the Star College scheme in each identified college. This will be done progressively based on the availability of Foldscope.

Foldscope will be used as an educational and training tool to understand physics, chemistry, biology and instrumentation. It will be provided as a kit where the student starts by first building the actual unit from the kit; and explores curiosity driven questions surrounding the microscopic world in physics, chemistry and biology. The users build an online community and share insights, projects, questions and scientific discoveries with the community at Foldscope online platform.

Workshops and training programmes will be run by Prakash Lab in collaboration with Indian institutions. The nascent Local Foldscope community based in India will also be involved in training.

After this initial pilot program, the collaboration with Prakash Lab will be expanded to setting up of joint research for explorations of other low cost instrumentation in colleges as deemed mutually appropriate.

This was a case of matching of views that is focused to create a spark. The Prime Minister has been stressing on using Indian experts abroad to bring benefits to India.