

Learning Mathematics through Narrative.

Funding Requirement INR- 60L over 3 years

Objective

In this project, we want to introduce mathematical concepts using short story books. These books will introduce fundamental aspects of mathematical reasoning and proof writing. The proposed structure is to attract and encourage students toward mathematics using a narrative story. The content of the story will guide readers toward mathematical formalism; stringing together statements in a logical order to conclude a mathematical statement.

Impact

The story books aim to cover several class levels (3-5, 6-8 and 9-12 standards). Each book will introduce a mathematical concept. The students are assumed to know what is commonly taught in textbooks as background, e.g., NCERT books. Through the narrative based books, young audiences will become familiar with logical reasoning and conceptualization of models as opposed to rote learning methods. This will help them overcome the perception of mathematics being difficult. In addition, this will garner long-term interest in mathematics and open avenues for mathematically inclined pupils to pursue a mathematics oriented career.

Project Description

Research in elementary education suggests that narratives help children learn a subject better. Research also suggests that a narrative without reiterating the methodology, that is, writing down the steps to reach an argument, the mathematical reasoning behind a particular formula or method, can make the students understand and apply the ideas incorrectly. In this project, we want to introduce mathematical content via short story books with some aspects of mathematical reasoning which is often introduced only at the higher secondary and undergraduate levels.



Principal Investigator

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Co-Principal Investigator

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Dean Alumni and Corporate Relations Office, IIT Bombay





Shabdamitra- A digital aid for language teaching and learning for Indian languages.

Funding Requirement INR- 50L over 2 years

Objective

Enhance digital language learning and teaching.

Impact

- There's non-availability of standard digital tools for natural language education in schools. As natural language education with digital tools will transform the life of students- this web based tool will help enhance digital language learning and teaching.
- The beneficiaries are school going children +Language Teachers + Language learners.
- Our solution will provide with a multi-faceted tool which will enhance the capacity of the learner and will help the teacher to be more efficient. This will also be helpful in rural areas as the tool will be also available offline.

Project Description

- The solution will provide with a multi-faceted tool which will enhance the capacity of the learner and will help the teacher to be more efficient.
- This will also be helpful in rural areas as the tool will be also available offline.
- The milestones are to Reach Different school boards for dissemination.
- The patent is filed, Trademark is granted.



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Policy Talks, Dialogues, and Advocacy.

Funding Requirement INR- 10L over 2 years

Objective

To explore and disseminate cutting edge theoretical insights from and into the field of public policy.

Impact

Often the premises of policies, relevant at the time of conceptualization, become redundant at by the time of implementation. Also Policy makers rarely know the newest innovations in thinking about their area of interest. Through these talks, seminars, and dialogues, we will bring the newest research ideas in a simplified form to policymakers, IITB faculty and students.

Project Description

- Ensuring a vibrant venue for continuous conversations between researchers and policymakers.
- An annual series of research seminars and policy dialogues to explore and disseminate cutting edge theoretical insights from the field of public policy. The Talks will be a venue for both accomplished scholars in the field of public policy and researchers from within ADCPS and the wider academic community at IIT Bombay to discuss research findings and explore new boundaries of public policy.



Principal Investigator

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Development of IIT Campus School Building & Grounds.

Funding Requirement INR- 5Cr over 4 years

Objective

- 1) To actualize quality, inclusive education within its classrooms and beyond
- 2) To productively intervene in the education-ecology in the neighbourhood & city
- 3) To create an inspirational model for community led public education in the country

Impact

- It will create IITB a wholesome and complete education complex: from kindergarten to postgraduate research programmes.
- It will take the quality education to the first gen learner coming from grassroot level.

Project Description

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- short term upgrade: i) multi-purpose auditorium ii) remodelled playground iii) smart classrooms iv) revamped, well-stocked library & laboratories
- Long-term infrastructural transformation & phased redevelopment of school building
- in-service programmes: teacher training to continually better pedagogic practices & knowledges
- material production: develop teaching aids, workbooks, learning material
- curate best practices

Principal Investigators

Campus School Council with IITB Director as the Chair Members: **Prof. PP Date (PI)**, Professor; ME, **Prof. Sharmila (Co-PI)**, HSS, **Prof. Abhijit Majumder (Co-PI)**, ChE Email: ppdate@iitb.ac.in, Sharmila@iitb.ac.in, abhijitm@iitb.ac.in

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Study of Performance of Primary Teachers from the Government Schools from Remote Rural Areas.

Objective

- To investigate the factors affecting the performance of primary teachers.
- Based on this investigation to make relevant policy recommendations through policy briefs.
- Based on this investigation to write a book for non-academic book in order to create awareness about the urgency and chronicity of the issue.

Impact

The research focuses on gaining deep and nuanced understanding the factors affecting performance of the teachers in primary schools in remote rural areas. This will help bring out many key policy recommendations for improving performance of primary teachers. It will also help to create awareness of the urgency and chronicity of the issue among different sections of population though writing of a non-academic book.

Funding Requirement INR- 5L over 1 year

Project Description

The performance of primary school teachers is one of the crucial weaknesses of the education sector which severely affects the social and economic development of the country. This proposal involves fieldbased, theoretically-informed, and methodologically-sound primary research for identifying measures to improve the performance of primary teachers from the schools in the mountainous remote region in Tamil Nadu. Based on the findings, the project will deliver a technical report, a book manuscript, and five short policy briefs.



Principal Investigator

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