NIAS Education Programme

Reaching the Unreached

National Institute of Advanced Studies
The Education Programme at NIAS has, over the last two decades, developed into a strong academic programme in the country devoted to research, teaching, curriculum development, policy analysis and advocacy.

Our main objectives have been to conduct critical research in important, uncharted, non-mainstream areas of education. Our various engagements are premised on observations that the education system in India is entrapped in several contradictions.

The challenges are multiple: How to develop national models to address issues around equality and quality and excellence? What models and practices of education are suitable for a diverse population? What are stubborn persistent problems in education? How can local and national priorities be matched with the pressures of global regimes? What linkages must education institutions have with the social, political and economic worlds of the people?

In addition to the scholars from around the world, we have collaborated with administrators, government officials, students, teachers and civil society organisations.

Our work is carried out through the following three nodal initiatives:

- Platform for Education Policy
- Curriculum Exchange Network
- Research in Critical Areas of Education.

Working on all levels of education and interacting with different stakeholders, we have been involved in identifying trends, reviewing schemes and policies, drafting reports and collaborating around issues involving meaningful, viable visions of education.

**Highlights and Major Achievements**

Our team has made significant contributions at all levels of education. In particular, our work on school quality, education of the disadvantaged, education of the gifted and women in the STEM disciplines has been recognized nationally and internationally. Our contributions in teacher education and advocacy
have gained us collaborators in various institutions and organisations across the country.

The major focus areas over the last decades have been the following:

- Quality of education in schools (1998-2008)
- Women in STEM disciplines (2007-present)
- Education of the Gifted and Talented (2010-present)
- Education among Adivasis (2010-present)

We draw on several disciplines in its inquiry and approach. Over the years, the programme has drawn on the disciplines of sociology, anthropology, cultural studies, indigenous studies and women and gender studies, history and psychology. Through our work we have also been able to secure research grants. Since 2016, four of our projects have been supported TCS-NIAS initiatives. These include: (1) Education of the Gifted and Talented (2) Social Exclusion and Education (3) Women in STEM disciplines (4) Vocational and Higher Education. Each of the four projects will go on to make a mark in the next three years.

“The Education Programme truly encapsulates what NIAS stands for - work which is interdisciplinary, socially responsible as well as nationally relevant and important. The quality of the work along with the significant impact due to its outreach workshop and courses should make this programme a model for others”

- Sundar Sarukkai

NIAS Education Programme

Social Exclusion and Education

Education has assumed an important place in the overall social and political imagination in India. While there has been phenomenal expansion and democratization of education since independence, legacies of discrimination and denial persist.

We hope to understand the processes that impact marginalization of communities and the ways in which social disadvantage and formal schooling are connected. Our inquiry is interdisciplinary, historically attentive and filedbased.

Milestones

Following are the milestones of the Programme’s focus on Social Exclusion and Education:

- The Programme has developed a Learning Experience Survey that is currently being conducted in various Ashram schools of Maharashtra
- The Programme organized several teachers meets, training and dialogues on curricula
- The Programme also published its work in scholarly as well as popular spheres

Way Forward

- As we build on our work and expand, we hope to develop a robust research trajectory on education and social justice
- We also realize the need to develop curricula and pay attention to teacher education in ways that are attentive to the demands of contemporary times
### Education Programme

#### Looking Ahead: A Road Map

With decades long experience in field based research on all levels of education and our attempts to link education research to policy, advocacy, teaching and outreach, the education programme at NIAS has the potential to become one of the leading centres of education research in the country.

We want to build on our current strength and expand in the next few years in order to address critical and relevant problems of education. We hope to establish stronger ties with schools, colleges, universities government departments and policy makers.

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### Women in Science Technology Engineering and Mathematics

#### Engineering and Mathematics

The Women in STEM project at NIAS has been active for over a decade. The earlier IASc- NIAS study “Trained Scientific Women Power: How much are we losing and why?” not only provided a large database of women professionals but also raised critical questions, which are now being addressed through a qualitative inquiry.

The present study seeks to record 1) the diversity of women scientists’ experiences vis-à-vis disciplinary and institutional spaces and 2) the strategies deployed by women scientists to assemble favorable conditions for research and professional growth.

To briefly elaborate, research in India is done in a variety of settings: in research institutions, national labs, institutions of national importance, central, state, deemed and private universities and so on. Funding and laboratory facilities vary as do access to reputed networks. In this context, the study traces how differently positioned women scientists navigate this diversity to do credible research. Further, by comparing across generations, the study will also document the impacts of changing institutional frameworks in

“Our work includes a combination of intensive field work, social/cultural critique and policy analysis. Our work situates the problem within the complex and contradictory social reality; it also has a strong participatory component as we work with students, teachers and administrators among others.”

- Shivali Tukdeo
Reaching the Unreached

NIAS Education Programme
National Programme of the Gifted and Talented

The NIAS National Gifted Education Programme is first of its kind in India. The program aims at developing a robust India based model for identifying and mentoring gifted children in the age group 3-18 years. It was initiated by Prof R Chidambaram from the office of the Principal Scientific Adviser, Government of India in 2010. The advisory group steering the programme includes Prof Baldev Raj, Prof VS Ramamurthy and Prof S Mohan (IISc).

Gifted children are those who have exceptional possession of untrained and spontaneously expressed natural abilities in at least one domain to a degree that places the individual at least among the top 3 per cent as compared to their age peers.

Gifted Children Programme: Milestones
Following are the major milestones of the Programme since its inception:

- An India based protocol to identify gifted children in mainstream schools was developed
- As part of the identification protocol, Teachers Training Manual to train teachers to identify and support gifted children was developed. Variations of the material are used to train parents, school management, and trainers. The manual is available in English and Kannada.
- Mentoring support for gifted children, parents, teachers and schools were developed and provided. Additionally, counselling services and resources for the gifted are part of the mentoring support. Currently, 70 gifted children are identified and mentored through the programme.
- To increase the outreach May I Help You Centre for the Gifted Children is hosted on the website: www.Prodigy.net.in
- Collaborations with government departments and private school foundations to provide support for the gifted children are developed. Gifted education is introduced into the revised D.Ed. curriculum of Karnataka for the first time.

The Way Forward
The Gifted Children Programme is aiming at the following:

- Develop a robust multi-level, multi-stage model for identifying and mentoring the gifted children of diverse India.
- Develop a Gifted education centre for India that provides services for the gifted based on Research and Development.
Education Programme

Recent Publications


recent times. The project seeks to weave together a rich tapestry that attends to institutional diversity and generational transitions, one that meticulously documents women’s challenges and pleasures in doing research.

Emerging Concerns in Vocational and Higher Education in India

Currently, India is among the countries with the lowest proportion of trained, skilled youth in the world, despite, it’s glaring opportunities in terms of demographic dividend. Emerging concerns in vocational and higher education is an important area that the education programme is currently attempting to make in roads into.

NIAS conducted a two day National Consultative Meet to mainly discuss VET and skill education by paying attention to the overall canvas of VET and skill education taking place at national scenario and specific state level concerns such as Karnataka and the Northeastern states. The Consultative Meet provided valuable resources on crucial issues for policy intervention.

As a first step, NIAS is undertaking a research project that examines the entry and career trajectories of diploma/ITI trained in Karnataka.
The research study attempts to understand the skill gaps between the training institutions and the industry requirement. In other words, the study will map the skills to the current employment opportunities of these diploma/ITI trained professionals and trace their career growth with the fast changing employment market.

Moving forward, after identifying large manufacture industries in the state of Karnataka, Education Programme, NIAS has begun working in the field. Broadly looking at the interface between vocational and higher education, the current field study focuses on the aspirations, motivations of vocational graduate employees and their institutional/training background. Apart from understanding motivations and aspirational gaps, the study would shed insights on how vocational trained graduates and diploma holders feed into the existing industries for follow up policy intervention and initiatives. The first field engagement began at BHEL where interaction with sixty employees including draughtsman and supervisors has been completed. The study employs both qualitative and quantitative methods. The sample data constitutes of representative population.

**Education Programme Recent Publications**


Major Training Programmes

The Education Programme organised a series of training programmes as a part of its research activities.

Some of them include:

- NIAS Orientation Course on an Integrated Approach to Knowledge and Information for University and College Teachers
- First NIAS-GEAR Workshop on Identification of Gifted Children in Science and Mathematics for School Teachers
- International Training Programme on Leadership and Career Development for Women Scientists and Technologists
- NIAS-DST Training Programme for Women Scientists on Science for Progress in India: Innovations in Technologies
- Consultative Workshop on Future of Education: The Schools of the Future
- Course under the ISHAN VIKAS-UDHAN Programme for School Children

“With Reaching the un-reached as its driving spirit, the NIAS Education Programme works towards making Education for all as a non-negotiable aspiration of free India. Even after seven decades of independence, free education remains unfulfilled due to resource constraints and unique geographical constraints of rural India leaving a section of the population un-reached by the formal educational system. NIAS Education Programme strives to reach them and also those children with learning disabilities and with unusual learning capabilities”

- VS Ramamurthy
NIAS Education Programme

NIAS MAIYA Prodigy Programme

The National Programme on Gifted Education, PRODIGY – Promoting and Developing India’s Gifted Young is anchored at NIAS under the stewardship of Prof Anitha Kurup, Dean and Professor at the National Institute of Advanced Studies. The Gifted Education Programme is a national initiative of the Office of the Principal Scientific Advisor to Government of India. The programme was initiated in 2010 by Prof R Chidambaram and continues to focus on identification and mentoring gifted children in the age group of 3-18 years.

The programme is guided by stalwarts like Prof Baldev Raj, (Director, National Institute of Advanced Studies), Prof VS Ramamurthy (Emeritus Professor, NIAS), Prof S Mohan (Emeritus Professor, Indian Institute of Science) and Prof SS Iyengar (Ryder Professor, Florida International University) and Prof AH Rama Rao, President, National College, Bengaluru, among others. The Gifted Education Programme has established collaborations with the Indian Institute of Science, Silver Oaks International school, Bengaluru and Hyderabad, Vidyashilp Academy, Bengaluru, Idea lab, Visveswaraya Museum among other institutions.

From 2010 NIAS Gifted Education Programme has made important strides in terms of devising mechanisms for identifying and mentoring gifted children, sensitizing teachers and parents regarding gifted children. In our journey towards expanding the efforts, NIAS has been exploring ways to create an international platform. With this perspective, NIAS MAIYA PRODIGY FELLOWSHIP PROGRAMME, an important collaboration with Iyengar foundation and National College Basavangudi was launched on the 6th January, 2017 at the JRD Tata Auditorium, NIAS, IISc Campus.

The programme aims to identify talent at grades X and XII and embark on an active mentoring initiative to accelerate youth achievement in promoting the development of India’s Gifted Young. The programme offered fellowships (Rs.50,000/-) to the identified individual and links them to an active mentoring programme.

The inauguration of the launch of the talent Search and Mentoring Program was done by Bharat Ratna CNR Rao. Other dignitaries who were present during the launch were Prof Baldev Raj, Prof SS Iyengar, Prof Anitha Kurup, Dr AH Rama Rao, Dr AS Kiran Kumar and Dr P Sadananda Maiya.
Future of Education: Schools of the Future

Supported by Tata Consultancy Services and Karnataka Jnana Aayoga

29 July, 2015

A consultative workshop on the Future of Education, with a focus on the school sector, was undertaken by NIAS, as part of a global foresight series titled Future Agenda. It was the 6th workshop on Education, in a global series of 100 workshops on 21 different themes, conducted across 50 countries across 5 continents. The top 100 insights from 2015 will be disseminated to Future Agenda hosts, partners and collaborators, who will in turn use them to create their own thought pieces and organisational strategies.

The workshop took place in the context of tectonic changes in the education sector – brought about by the huge increase in numbers of children entering the school system, the possibilities and trends brought about by changing pedagogies including the impact of technology, the changing aspirations of parents and students and the global competitive pressures on the knowledge economy. The workshop aimed at enabling a multi-stakeholder dialogue, with the objective of visualising the schools of the future and the possible direction of change. Reaping the ‘demographic dividend’ requires concerted action, based on planning and foresight.

The workshop drew over 100 participants from across the country of a diverse set of stakeholders. The workshop was attended by Policy-makers, Non-profit entities engaged in the education sector, Technology providers, Corporates engaged with the sector, Psychologists and Researchers, Educators (Teachers), Educationists (Education experts) and Educational Institution Management representatives. Care was taken in bringing together a set of participants with wide and sufficiently diverse experiences. The workshop was planned so as to assure representation from key stakeholder groups.

Further, the workshop was addressed by eminent persons with a track record of national and global service in the public and private sectors, and wide-ranging engagement with the education sector, via keynote speeches and discussions.

The broad themes that were discussed in the workshop were:
1. Key National Challenges
2. Role of Technology & New Teaching-Learning Practices
3. Changing Roles of Teachers & Students.
4. Evolving Student Aspirations
5. Working with Diversity
6. Going beyond Knowledge & Skills – into Values & Ethics

The Workshop Report as well as the Recommendations made are drawn from the rich material that was covered in the inaugural and valedictory plenaries, as well as the day-long exercise of focus group discussions on the thematic areas listed above.

Recommendations

The workshop has resulted in 35 recommendations, which have been classified as below, reflecting some of the recurrent powerful themes that attended upon the discussions:

- Building a Cadre of Teachers & Enhancing Teacher Status
- Reforming the Examination System
- Establishing National Quality Standards
- Making Indian Students Internationally Competitive
- Empowering & Promoting Innovation in Schools
- Replicating Successes
- Education Planning & Public Policy Measures

Access the full report at http://eprints.nias.res.in/942/
Anitha Kurup is Dean, Professor and Head of the Education Programme. Her research interests span the broad disciplines of education and gender studies. She is also leading the National Gifted Education Program in India. As part of the Gifted Education research, she has developed an Indian based identification protocol to identify the gifted children in the age group 3-18 years.

Shivali Tukdeo is an Associate Professor. Her scholarly engagements are rooted in education policy, critical social theory and sociology of education among others. Her research interests include sociology of education, global studies in education and gender studies.

Shalini Dixit is currently an Assistant Professor in the education programme. Her research interest lies in understanding the Cultural and Cognitive Processes in appreciation of History, Critical aspects Educational Psychology, Cultural Processes, Social Psychology, Gender Issues with Social Psychological perspective, and Rogerian approach to Personality and Communications etc.

Jeebanlata Salam is an Assistant Professor. Her main research interest includes Sociology of Education, Social Exclusion, Education Policies, and Vocational & Skill Education, Studies in Ethnicity, Conflict, Violence etc.

Malavika Kapur is a Visiting Professor in the Education Programme. Her research interests lie in the areas of child psychology. Currently she is working on an action research on understanding the play based strategies in the promotion of psycho social development of school children.

Leya Matthew Post Doctoral Fellow

Bharat Chandra Rout Post Doctoral Fellow

Research Associates & Scholars

Chetan B Singai

Ajai Chandra

Anupama Mahajan

Ashwini Gowda

Savitha Suresh Babu

Samhita

Subroto Dey

Mrinmayee Mandal

Surbhi Arora

Shivangi Singh
An Introductory Reading on Giftedness in Children
NIAS Report- R14-2013
The Introductory reading on giftedness in children is a compilation of research understanding on the notions of giftedness. The report attempts to challenge the limited definitions of giftedness and argues out the importance of a more concerted programme of gifted education in India. The report depicts and reviews the current research on important concepts in countries with well established gifted education programmes and discusses their relevance to the Indian context.

Case Profiles of Gifted Children: Identification of Gifted Children in Maths and Science in the Indian Context (3-15 years)
NIAS Report- R13-2013
The report presents a selection of case profiles undertaken by the NIAS Gifted Education Project in an attempt to understand the nature of giftedness in India and at the time the report also represents the challenges faced by gifted children in a country where there is an absence of integrated gifted education programme. The report attempts to project the paintings of a gifted child’s life and attempts to unpack how social, emotional and cognitive developments factor in a gifted child’s pursuit while reaching its optimal potentials.

Teacher Training module for Identifying Gifted Children
RX- 2013
The teacher training module for identifying gifted children is a handy tool which aims to sensitize and introduce the concept of gifted children for teachers and educators. It presents detailed information on understanding giftedness, myths and misconceptions about giftedness, issues related to identification and classroom management strategies etc. The Training manual also equips the teachers to use a Teacher Nomination Behavioral Rating Scale (TNBRS), which aids in observing and nominating gifted and talented children from their class rooms. The teacher Training Module for identifying is available both in English and Kannada languages.