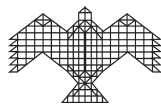


ENGAGEMENTS IN HIGHER EDUCATION SEMINAR REPORTS

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TABLE OF CONTENTS

Background	1
<i>Engaging with Higher Education: Interventions by Education Programme, NIAS</i>	
India's Higher Education: Challenges and Opportunities (April 04 - 05, 2013)	3
<i>Summary and Key Recommendations</i>	5
<i>Way Forward</i>	11
Women in Higher Education and Research: Dilemmas and New Directions (June 20 - 21 2013)	13
<i>Summary and Key Recommendations</i>	15
<i>Way Forward</i>	21
About the Education Programme at NIAS	23
Acknowledgments	23
Annexures:	24
<i>Annexure 1:Program Schedule of the seminar on 'India's Higher Education: Challenges and Opportunities', April 04 - 05, 2013.</i>	24
<i>Annexure 2:Program Schedule seminar on "Women in Higher Education and Research: Dilemmas and New Directions", June 20 - 21, 2013.</i>	27

BACKGROUND

Engaging with Higher Education Interventions by Education Programme, NIAS

The Education Research group at NIAS has been involved in diverse interventions in research, advocacy and teaching in the arena of higher education. The higher education sector has witnessed an unprecedented growth bringing in new players and new kinds of institutions warranting continuous dialogue and debate with key stakeholders – experts, faculty, students and the larger society. Our research over the last few years has focused on Women in Science, Technology, Engineering and Mathematics (STEM) disciplines, international student migration, institutional studies and policy innovations in higher education. Through collaborations with networks in higher education such as Emerging Directions in Global Education (EDGE), the Education Programme has regularly organised workshops and conferences. In order to broad-base the conversations and bring together junior and senior scholars, practitioners, administrators and students, the Education Programme organised two

conferences in the year 2013: (a) Higher Education: Challenges and Opportunities (b) Women in Higher Education and Research: Dilemmas and New Directions.

Being one of the world's largest systems, the higher education sector in India is as complex as it is massive. Most scholarly engagements over the course of last fifty years have tended to focus on historical analysis, social and political critiques, ethnographies of higher learning, politics of online education and the changes in policy orientation. In order to capture the varied nature of contemporary higher education, the first conference was planned with a broad overview of the system whereas the second conference included a focused area of interest. With these conferences, we hoped to create research networks in higher education and forge inter-institutional ties. The summary of these two conferences is a step towards greater dissemination of discussion; we hope to regularise these meetings and publish an edited volume based on the two conferences.

INDIA'S HIGHER EDUCATION: CHALLENGES AND OPPORTUNITIES

April 04 - 05, 2013

Seminar organised at National Institute of Advanced Studies, Bangalore

CONCEPT NOTE:

Indian higher education has been the topic of discussions, both in scholarly and popular worlds, as a sector that needs immediate attention and urgent intervention. Accordingly, with the number of national commissions in recent years and the introduction of various bills, higher education has clearly become the site of reforms that have occurred across a wide range of domains. It is also important to note that the dramatic transformation in higher education over the last two decades has accompanied with an overwhelming sense of crisis enveloping education at large. To reflect on these moments of crisis in education and to articulate the various challenges, the National Institute of Advanced Studies (NIAS), Bangalore has proposed a two-day seminar in April 2013.

As numerous scholars have noted, the expansion of higher education in India has occurred within a large policy vacuum. Rather than being part of the design and new imagination, the changes in Indian higher education continue to emerge from contradictory forces. Glancing at changes in higher education, the following trends can be observed:

- A range of new actors have become visible, as the higher education sector has expanded. These actors include

philanthropic groups, corporations, NGOs, and online education providers, among others. Greater expansion has brought in de-facto privatisation.

- Despite a gradual increase in the number of institutions, the General Enrollment Ratio in higher education looms at 15 %.
- The innovations in higher education are introduced atop a highly hierarchical and layered system with numerous types of institutions and administrative structures.
- The widening unevenness in various institutions in terms of quality has resulted in a handful institution doing research and training of international standards, while most others are caught up with heavy-handed bureaucracy.
- Due to the resurgence of certain academic programmes (information technology, management, computer science and related courses), there is a disproportionate increase in institutions offering these courses. In many instances, such growth has led to dubious quality of instruction, infrastructural support and teaching staff.
- For the first time, higher education has become the major cause for migration across national borders.

These trends are only indicative of the overall transformation. More pertinent

questions of recent times involve precarious contractual arrangements in many colleges, serious compromise on infrastructure and quality, emergence of the coaching industry, a decline of classical disciplines, over-politicisation of academic appointments, etc. Policy-wise, the higher education sector has been experiencing a dilemma between global and domestic pressures---global pressures including standardisation and accountability whereas local pressures include social opportunity and political power in higher education. At this juncture, it would be useful to turn to some of the questions that are central to the enterprise of higher education:

- How do we bring back critical public attention to higher education?
- What are the goals of higher education? How do we imagine higher education beyond its strictly economic logic?
- How can Indian higher education do justice to the ideals of excellence and equality?
- With the plan of 400 new central universities, how will the landscape undergo changes?
- How have bodies such as National Knowledge Commissions (NKC) steered changes?

In order to collectively think of these questions, NIAS Bangalore calls for participation from scholars, teachers, curriculum developers and policy analysts.

THEMES FOR SEMINAR INCLUDE:

A) **Access, Quality and Excellence** in Higher Education: For over six decades,

we have continued to struggle with adequate access to institutions of higher learning. In the meanwhile, our goals for the sector have shifted from mere physical access to that of access of quality higher education. In this thematic panel, we will explore the three important components of contemporary higher education reform.

- B) **Policy Orientation:** A series of bills in higher education will be the focus of this panel, along with larger international policy trends, impact studies and critical analysis.
- C) **Internationalisation:** In continuation with the previous theme, we trace international influences on higher education. In particular, the norms in curricula, evaluation and international migration of students, institutions and research persons will be explored.
- D) **Privatisation/Private Actors:** The thematic panel will focus on privatisation of higher education. Some of the specific interests include an analysis of private establishments, questions of quality, affordable private education, new entrepreneurial university etc.
- E) **Student Voice:** How do we make sense of student voice, protests, campus activism and politics in the contemporary times? To what extent do students have a voice in curricular, campus administrative matters? What is the connection between student unions and political parties? How do we make sense of student activism and its connection to larger progressive, civil-rights politics?
- F) **New Curricula and Evaluation:** The

discussion will focus on the emergence of new domains of academic inquiry including smaller interdisciplinary programmes, technology driven research, applied and policy research.

- G) New Institutions:** What do some of the new and independent institutions in the country tell us about doing specialised research and teaching? How do we understand newly established institutional spaces like the Centres for the study of Social Exclusion and Inclusive Policy?

SUMMARY AND KEY RECOMMENDATIONS (WRITTEN BY DR. SHIVALI TUKDEO):

The last couple of decades have brought varied kinds of changes in India's higher education. If the number of national commissions and proposed bills are any indication, the higher education sector will continue to be the site for reforms and interventions in coming years. There have been some responses to the specific changes and policy prescriptions, but an overall articulation and a regular stock-taking of the current conditions has been mostly absent. To reflect on the moments of transformation and to understand the various challenges before the field, the National Institute of Advanced Studies, Bangalore organised a two-day seminar on April 4 and 5, 2013.¹ To start, the purpose of the seminar was to create a platform for conversations across different domains. We hoped that scholars, teachers, policy makers, policy analysts, curriculum developers, administrators and

students should be the prime interlocutors in the critical discussions surrounding higher education. In accordance with the Education Programme's mandate at NIAS, we also wanted to forge greater inter-institutional linkages through this seminar and hope that similar meetings will continue to be held in future.

A set of broad questions that influenced the themes:

- What are the ways in which the goals of higher education have been shifting over the last few decades?
- How do we trace out the shifts in institutional knowledge production since independence? What are the trajectories of natural sciences, technology studies, social sciences, professional education, humanities and vocational education?
- How do we map out the changes in higher education, especially after 1980s?
- How can Indian higher education do justice to the ideals of excellence and equality?
- How have the global policy regimes impacted Indian higher education?

The seminar covered the following thematic sessions:

- Access, Quality and Excellence in Higher Education
- Policy Orientation and Analysis
- Globalisation, Internationalisation and Higher education
- Resource Gaps
- Privatisation

¹ The assistance provided by Reni George, Rashmi M., Sumitra Sunder, Priya Gupta and Namitha Kumar during and after the seminar is gratefully acknowledged.

- Student Voice
- New Curricula and Evaluation
- New Institutions, new disciplinary strategies

Additionally, four special lectures were organised:

1. Higher Education in the 21st Century: Challenges and Opportunities
2. Higher Education and Social Exclusion
3. Institutions and Policies: New Directions
4. 12th Plan and Beyond: The Future of Indian Higher Education

Broadly, the panels and conversations did revolve around the original agenda of the seminar and also went beyond it in many ways (see Annexure 1 for the seminar programme schedule). To this end, a set of observations about the conditions of Indian higher education were made:

- The phenomenal expansion of higher education has occurred within the large policy vacuum. The waves of reform in this sector have not become part of the overall design and new imagination; instead these changes continue to emerge from contradictory forces.
- A range of new actors have become visible as the higher education sector has expanded. These actors include philanthropic groups, corporations, NGOs, and online education providers, among others. Greater expansion has also brought in de-facto privatisation.
- Innovations in higher education are introduced to a highly hierarchical and layered system with numerous types of institutions and administrative structures.

- The widespread unevenness in the functioning of the various institutions has meant that there are a handful of quality institutions that are engaged in research and teaching of international standards, while a majority of the institutions lag behind, due to several reasons.
- As some academic programmes continue to attract greater demand-driven expansion (information technology, management, computer science and related courses), there is a disproportionate increase in institutions offering these courses. In many instances, such growth has led to dubious quality of instruction, infrastructural support and teaching staff.
- Higher education has become one of the major drivers for migration across national borders. While the connection between higher education, international migration and the elite class formation goes back to the 19th century, the volume of international student migration from India has increased manifold over the past few decades.
- Despite the recognition of its importance and urgency for revival, vocational education continues to be the marginalised 'other' of the mainstream academic streams. Further, there have been few attempts to forge links between the vocational and the academic; research and teaching, and universities and schools.

These trends highlight the complexity of contemporary conditions in higher education. Some of the pertinent questions

in recent times include establishment of contractual arrangements in many educational institutions, serious compromise on infrastructure and quality, decline of classical disciplines, over-politicisation of academic appointments, etc.

SPECIAL LECTURES: CRITICAL ASSESSMENT AND USEFUL INTERVENTIONS

In his public lecture, 'Higher Education and Social Exclusion', Gopal Guru started by addressing one of the central assumptions. Exclusion in education is often understood by looking at those who are absent from the spaces of higher learning i.e. the 'missing' girls in Mathematics research or the missing Adivasi and dalit students in IITs and IIMs. However, he went on to demonstrate that thinking of access and participation along these lines may not be enough, since it overlooks two central contradictions of our system. First, institutions of national importance and the ones engaging in excellence in research have historically prioritised 'national development' over marginalised communities' access to higher education. In effect, the elite institutions affirm that the national development and social justice are two distinct ideals, goals and purposes. The second contradiction pertains to the ways in which knowledge production in the disciplines in social sciences (and to an extent, humanities) took shape in many institutional contexts. In recent years there has been a greater democratisation of social sciences and humanities as many of these subjects have offered a soft landing to Dalit and Adivasi students. There are greater numbers of first generation learners in our state universities; colleges and many scholars

from the marginalised communities have been engaging in knowledge production. Yet, there exists a sharp division between social theorists and those whose work is empirical. Education and social exclusion are both connected to the numerous other processes that carry with them a set of historical, social and political legacies and particularities.

The second public lecture by Prof. J.B.G. Tilak offered a critical assessment of Indian higher education. Tilak stated that our education has been in crisis for many decades. The current crisis, however, is of different proportions and can be more damaging. If one were to take stock of Indian education, one can think of three major challenges that our system faces: Finance, expansion and quality. However, if we analyse the current conditions of higher education, the crisis that looms large is that of policy. The trends over the past few decades show an arbitrary development of higher education policy. The following, in particular, are of concern:

1. Reproduction of the international discourse surrounding world class universities and university ranking without thinking of its relevance to the questions faced by Indian higher education.
2. Expansion of institutions has resulted in the massive growth of private institutions.
3. Greater privatisation of higher education is soon changing into commercialisation and for-profit patterns.

Prof. CNR Rao's public lecture focused on the skewed national priorities that revolve around economic growth and miracles,

without giving much thought to education. The challenges faced by Indian education are manifold. In particular, the following four are identified to be of utmost importance:

- 1) The importance of teaching and research has gone down. For a variety of reasons, the profession of teaching is not perceived to be a great career option. As a result, we don't get quality students in teaching. Secondly, our systems are so rigid that even if we do get high quality and spirited teachers, they soon lose interest and succumb to the pressures of the system.
- 2) The structure of our universities poses a serious challenge to the reforms in higher education. The existing structure, particularly involving the affiliation system is one of the biggest impediments to quality education.
- 3) Centralised examination system and narrow criteria of evaluation.
- 4) Absence of the culture of educational philanthropy and institution building.

The fourth public lecture by Pawan Agarwal drew attention to the 12th 5-year plan and the approaches therein to meet the challenges of expansion with equity and excellence. Calling it the 'eco system approach', Agarwal noted that the plan aims to prioritise vocational, professional and general colleges, multidisciplinary universities and research institutes. The gist of the 12th plan strategy is the following:

- Centrally funded institutes, continue to be important, and function as exemplar institutions, for the rest of the system.

- Quality improvement to be based on national initiatives that benefit all institutions.
- Focus will be given to creating a strong performance culture through effective use of grants.
- Focus on evaluation and feedback of teaching and research.

THEMATIC PANELS:

The papers presented at the seminar covered a large range of issues and were part of the four, interactive panels focusing on the following themes: Educational Ideals (questions of exclusion, marginality, excellence, politics of resources); Institutional Issues (institutional structures and types, new strategies, public/private institutions, governance issues); Global Contexts (subject choice, international migration, neoliberalism, new managerialism).

EDUCATIONAL IDEALS:

Offering another reading of the narrative of failure, which has for long been associated with Indian universities, Ashwin Kumar looked at the conditions under which knowledge production and acquisition occurs. How did a place like Dharwad, for instance, gain and sustain prominence in creating great music and artists? Social milieu, in addition to the other factors, can be considered to be enabling the practices of creative teaching and learning.

In her talk on Gender, Caste and Language in Indian higher education, Anitha Kurup highlighted the complex interrelatedness of each of these categories. An historical examination of our approach to 'equity' and 'excellence' reveals that

they were considered to be separate and exclusive. As a result, the proposed solutions to address these issues also revolved on sequential treatments of these challenges. The recognition that equity and excellence are two sides of the same coin and are indeed complimentary will create a paradigm shift that may open new ways of addressing the persisting inequalities in higher education over the decades in the post independent period.

Focusing on marginalised groups and their experiences of higher education, Virginius Xaxa emphasised the need to pay attention to the heterogeneity of the experience. The tribal/Adivasi experience with education, for instance, is extremely differentiated across various regions of the country. He then drew attention to the correlation between the high quality school education in the North East and high enrollments; and lower quality of higher education and dwindling enrollments.

Saumen Chattopadhyay's paper outlined the status of social science research in India with special emphasis on resources for funding. The arguments were set in the context of the World Social Science Report (WSSR), 2010. While there are funding disparities among the various branches of knowledge, his paper focused on the following issues: the correlation between funding and increasing trends of institutional ranking, the complex connection between funding and autonomy of research, newer actors in funding for social sciences and their impact on research.

INSTITUTIONAL ISSUES:

Providing an institutional biography of Sastra University, R. Sethuraman shared the model, rationale and road map of the university. Established in 1984, the institute has grown in terms of the diversity of disciplines, faculty and students. The university has also sought to implement creative ways to teach and enable sustained measures for funding.

M.S.Ananth's paper highlighted the idea of creativity on the one hand, and the challenge of addressing access, quality and equity on the other in the universities in India. Given that creativity and individual expression are rarely encouraged in formal institutional context, Ananth suggests developing technology enhanced learning. Discussing the National Programme of Technology Enhanced Learning (NPTEL) for Indian Institute of Technology (IITs), his paper documented in detail the ways in which such intervention can be fruitful in overcoming the challenges of quality and access.

Where are private institutions placed in the debates on pedagogy, quality and access of higher education? Given the constraints under which most of our public institutions work, what can be the areas in which private institutions can thrive? Dhanwanti Nayak paid attention to the contours of the functioning of private institutions. Largely homogenous groups of students, a growing emphasis on job market and an increasing technologisation of teaching have been some of the visible markers of many private institutions.

Syeda Jolly Kazi's paper probed the notion of credentialism as she examined

the factors that influence students' choice of college and streams in Assam. Her work shows the following four reasons: (1) desired employment (2) interest in the subject (3) popularity and prestige of the college (4) financial security.

Gaurav J. Pathania's paper traces out identity based networks and new student movements on two campuses. Based on history and ethnographic work in Jawaharlal Nehru University (JNU) and Osmania University, Pathania observes that student politics is increasingly articulated through identity bases; in part moving away from the traditional elements of organizing.

Looking at the various actors and intermediate spaces, Chetan B. Singai's paper conceptualised the policy circles and policy trails in higher education. He paid attention to some of the governance strategies that have dominated Indian higher education since independence. In particular, his argument rested on the difference between the state universities and deemed institutions.

GLOBAL CONTEXT:

Karuna Chanana's paper premised on the transformation in the higher education sector in the context of a range of global processes. Institutional expansion, more choices in the curricula and greater linkages to employability is some of the visible changes in recent years. What does this mean for access and relevance of higher education? The link between gender and subject choices, she says, is becoming easier. Her analysis shows that women are choosing traditional male dominated subjects, but this has not significantly changed the gendered spaces of higher education.

Continuing with the thread of globalisation and its impact on higher education in India, Shivali Tukdeo looked at student mobility, especially its dramatic growth since the 1990s. From being concentrated to a handful of elite institutions, the student migration/ skilled labor migration from India is now much diffused. Putting international migration in perspective, her paper identified three moments in the history of Indian universities: (1) Universities as elite spaces mediated by colonial needs and logics (2) Universities as important agents of national development and (3) Universities negotiating internationalisation of various types.

Examining the welfare and neoliberal overtones, S. Srinivasa Rao's paper looked at 'Fee Reimbursement Scheme' in Andhra Pradesh. Privatisation of professional education has taken place at an alarming pace in the state and there are many overlapping factors that contribute to the phenomena in the past decade. While most of the literature focuses on the withdrawal of the state from the provision of education, Rao's analysis points out a conscious move by the state government to retain the flow of capital. The deep nexus between the state and the private sector also impacts the development of institutional expansion in Andhra Pradesh.

Drawing attention to the workings of neoliberalism in Indian higher education, Ravi Kumar stated that neoliberalism does what liberalism could not achieve. The state is clearly invested in thinking of education as an enterprise. Under the current regime, private bodies have entered into numerous administrative matters in universities and colleges. Neoliberalism has also meant more access and greater choice, but often at the risk of lower standards.

RECOMMENDATIONS/WAY FORWARD:

Drawing on the key questions, trends and the issues that came up during the two-day long interactions, the following recommendations are put forward in the hopes of re-envisioning higher education.

1. Structural Issues: Towards a better synthesis in policy making:

Higher Education Institutions in the country function within the deeply uneven structures including resources, regulations, curricula, faculty profile, and administrative systems among others. Recognition of the systemic, built-in inequality and resultant inadequacies would perhaps be the first step in thinking through some of the challenges that our higher educational sector faces. The diversity of institutional types (affiliation system, state universities, central universities, deemed and private universities, research institutions etc.) also reflects in the great amount of diversity in goals and purposes for which the institutions function. Thus, it is near impossible for the faculty in the affiliated colleges, for instance, to find time and intellectual resources to concentrate on cutting-edge research. Further, the policy moves in recent years have focused on doing away with existing institutions and introducing new structures. Instead of an entire overhaul, it is important to think of the ways in which the weaknesses of the existing structures can be addressed.

2. Equality of Access, Quality of Education:

The parameters of access and quality are some of the most important concerns before higher education and they continue

to be mutually exclusive for the most part. The quality of teaching institutions should increase and the exclusive nature of the highly selective research institutions must change. The terms 'access', 'equity', 'quality' carry with them a historical and material significance; as a result, they need to be defined broadly. In this context, then, it is useful to remember that access to institutions of higher learning involves the access to many other, allied social institutions. Access to good libraries, language resources, laboratories and academically fruitful living situations are some of the implicit factors that contribute towards, but often get subsumed in the standard articulations of institutional access. There needs to be a substantial improvement in the quality of teaching, curricula, doctoral education and research production.

3. Institutions:

Considerations of access and quality are very closely connected to working conditions, academic freedom, and the culture of educational institutions. Recent formation of the Institutions of Science Education and Research (IISER) and newer central universities is a welcome step towards high quality in research and teaching. Similar to the IISERs, a set of institutions need to be established focusing on social science research and education. Similarly, there needs to be an increase in funding for classical disciplines. Data on the institutions of higher education is crucial for scholars working in the field. The MHRD had conducted a survey of all the institutions of higher education in the country. Such initiatives need to be taken up and sustained

so that real data can be made available to the researchers in higher education.

4. Research on/in Education:

The state of research on education in the country leaves a lot to be desired. In the present institutional and disciplinary contexts, the research on education in India is housed within diverse departments including sociology, psychology, history, economics and management. Research carried out in

universities and institutions rarely feeds into the practices of teaching and learning. There exists the need to strengthen research in several spaces of higher education. Evidence based inquiry into the conditions, status, and an appraisal of policies should gain priority in research, along with the analytically rigorous works exploring education with all its nuances. Of particular urgency is the need to have better coordination between various institutions and agencies working on higher education.

WOMEN IN RESEARCH IN INDIA: DILEMMAS AND NEW DIRECTIONS

June 20 - 21 2013

Seminar organised at the National Institute of Advanced Studies, IISc campus, Bangalore.

Supported by

Department of Science and Technology, Council for Scientific and Industrial Research and
Department of Biotechnology, Government of India

CONCEPT NOTE:

The world is increasingly moving towards a knowledge economy. This revolution has shifted focus on individual nation's abilities and resources to produce and generate new knowledge that can place it on the top of the power hierarchy. Knowledge creation depends on a robust education sector particularly in relation to higher education and research.

Enrolment in higher education has steadily been rising over the past decades. The 12th five-year plan targets to reach 30 percent enrolment in higher education by the end of 2020. The increase in enrolment of women has also been rising across levels of education. In a recently conducted study on "Trends in Higher Education: Creation and Analysis of Database of PhDs in India during the years 1998-2007"² covered over 45,000 data points. The data revealed that except for engineering (here the percentage of women doctoral holders was 22%), all disciplines including natural sciences, medicine, humanities and social sciences had over one third (33%) of the total number of PhD holders as women. However, this percentage

is not reflected among the tenured faculty across research positions across the country.

Despite the increasing number of women in higher education, the trend has been different across broad domains of knowledge, namely Natural Sciences, Humanities and Social Sciences. The differential patterns of representation of women in tenured track positions has been far from satisfactory particularly with reference to certain disciplines, like the mathematics, engineering, physics and management sciences. Although women constitute over one-third of the total Science graduate and post-graduate degree holders but comprise only between 15-20 percent of the tenured faculty across research institutions and universities in India.³ Further, the relatively higher representation of women is seen in the low status jobs (e.g. junior/ ad-hoc faculty, temporary research associates, post-doctoral fellows, etc.) in Science that have been vacated by men due to their lower profitability. However, as Bal (2004) has pointed out, a permanent position with the ability to undertake research projects with appropriate institutional facilities, advise

² <http://www.nias.res.in/docs/bkanitha-surveyreport.pdf> retrieved on August 26, 2014.

³ INSA (2004): Science Career for Indian Women: An Examination of Indian Women's Access to and Retention in Scientific Career, INSA Publications, New Delhi.

doctoral students, and publish is important for a stable career in Science.⁴

While the corresponding numbers of women in tenured track positions in Social science and humanities are better, they still do not constitute the 50% proportions in the reputed social science humanities institutions of national repute in the country. This may not be true for the departments of social sciences and humanities in universities. Additionally, is the increased casualisation of teaching at the university level leading us to enquire if there is a feminisation of the profession at this level with a circular process of women leading to casualisation or casualisation attracting women professionals in this field. Clearly, there are broad similarities and differences of women professionals in higher education and research across different knowledge domains as well as different institutional spaces- research organisations, universities and industries. Are there differences in patterns of the distribution of women professionals in higher education institutions across geographical boundaries? Are the responses of women professionals in research negotiated differently by women across different age groups/across generations, marital status?

The seminar is aimed to explore the following themes to seek answers/viewpoints and arrive at a broad pattern of understanding of this complex group of women professionals, an important segment of knowledge workers.

1. Women professionals in science and engineering
2. Women professionals in humanities and social sciences
3. Experiences of women scientists

Since competition to remain and advance in Science careers begins at the earliest stage soon after PhD, it is important for women to establish themselves during their early 30s, a period that coincides for most Indian women with marriage and family commitments. Breaks or temporary research positions of 3-5 years during this period do not offer the advantage of moving up the ladder at a later stage when family commitments take less time. In other words advancing one's career in science during the early 30's is extremely critical for entry into formal spaces in science and engineering. This is also true for women in Arts and Humanities. However, the formal spaces in science and engineering are far more rigid and structured making the entry relatively more difficult when compared the Arts and Humanities. Thus, as a compromise, a large number of qualified women scientists opt for under-graduate or school level teaching, while others completely drop out of Science and engineering. This has serious implications for the loss of trained scientific human power in the country.

Even though there is recognition of this 'winding career path'⁵ for women, Science policy makers often ignore the strong urge, willingness, absolute dedication and

⁴ Bal, V.(2005). Women scientists in India: Nowhere near the glass ceiling. *Current Science*: 88(6) . pp. 872-878. <http://www.ias.ac.in/currsci/mar252005/872.pdf>

⁵ Elgquist-Saltzman. (1992), for an explanation of 'winding career paths for women'.

more importantly the need for women to stay active in research despite their other responsibilities. Often, family or personal crisis during critical periods of women's career act as serious impediments for women in the Science Technology Engineering and Mathematics (STEM) to advance their careers. Absence from active research through breaks cannot be compensated for at a later stage in the highly competitive environment of Science. This is true for women in research in other disciplines like social science and humanities. Therefore, policies designed to provide extended maternity breaks or temporary research projects may actually not address the central problem and may instead work against the interests of women.

Keeping these factors in mind, a study was conducted by the Indian Academy of Sciences in collaboration with the National Institute of Advanced Studies in order to develop a set of recommendations from the actual experiences of and data obtained from women scientists. Acknowledging the diversity among women scientists, efforts were made to include women who have continued in Science as well as those who have dropped out. It is important to note that while several recommendations of this study⁶ may have appeared in earlier reports, our attempt has been to qualify these recommendations with nuanced field data so as to overcome major hurdles during their implementation.

In the context, a two day seminar on **“Women in Higher Education and Research:**

Dilemmas and New Directions” is planned as part of silver jubilee celebrations of NIAS at the JRD Tata Auditorium on the **20th and 21 June 2013**. NIAS has over the years been focusing on unpacking women in the STEM disciplines and the associate issues. This conference aimed at providing a platform for researchers, scientists, engineers and policy makers from the government, private sectors and industries to deliberate ways and means to attract and retain this highly skilled human power and harness their potential for the development of the nation and humankind as a whole.

SUMMARY AND KEY RECOMMENDATIONS:

Across the globe, attracting and retaining women in higher education and research, continues to be a challenge. Despite the many strides made in this field, debates on issues surrounding the participation of women in higher education are as relevant today as they were a hundred and fifty years ago. How do women operating in different workspaces negotiate their careers? Are certain knowledge domains or institutional spaces more favorable to women than others? Do we need to revisit our understanding of work practices and policies that are ostensibly intended to promote the participation of women in higher education? Through invited lectures and panel discussions, the conference highlighted the current status of research in this area, review our understanding of women-centric research policies, and discuss the challenges of working in different knowledge domains.

⁶ B.K. Anitha and Kasturirangan. K (2007): Engendering Science and Technology Education in India In the Proceedings of International Conference on Women's Impact on Science and Technology in the New Millennium organised by TWOWS, TWAS Regional Office for Central and South Asia, JNCASR, Bangalore (Pp. 92-95).

Dr. Vijay Raghavan, from the Department of Biotechnology, Government of India presented the inaugural address for the conference. His presentation clarified that although slivers of change (higher women enrolment rates) have materialised, the general issues from the past still exist today with due importance. He emphasised the role of systemic problems with the way our politics and societies are structured, which needs to change, and the need for practical solutions.

A small critical mass of scientists keep making it back into the committee, resulting in a drop in the quality of these committees. He suggested that we should be global in allowing women scientists from all over the world into our committees (promotion committees, advisory boards, etc.) as they bring in diversity and put pressure on our management to look at the other views that can be promoted.

It is important for women to break the barriers and replace the 'alpha males', and not to emulate them, for they interfere with the broadening of the base and block the road for any sort of change. The role of institutions in articulating the meaning and scope of science and technology provides the way forward for the role of women in this sector and hence enabling a level-playing field in the society. He describes that this is poor in our society – much of the articulation is about the problem, and much less about the solutions and intellectual depth of change that is required. He concluded that it is critical that we address the problem's smaller aspects (what is the quality of daycare or committees) as well as the bigger aspects (our institutional viewpoints, etc.)

Prof. Vijayalakshmi Ravindranath from the Center for Neurosciences, Indian Institute of

Science delivered the keynote for the conference. In the key note she focused on the importance of gender parity, women in the work environment and the need to encourage women to aspire. She opined that making science-enterprise gender-friendly was vital because (a) Men & women bring complimentary expertise and strengths, (b) allowing for the leaky pipeline would mean losing a great national resource. Huge changes in the demography of India have made us the largest suppliers of working force for the world.

This age group of working force can only become the demographic dividend of a country if they are provided with access to education and skill training, so that they can contribute to the economy (more so in a knowledge-based economy). If this dividend is to pay off, it is essential to make it our imperative to find ways to implement new ways of making a change.

Our potential is at addressing issues of gender disparity at the high school level (something that the DST has done through the Innovation in Science Pursuit for Inspired Research (INSPIRE) program). The percentage of girls in education programs starting from Middle school all the way up to the Master's level remains at 60%, and then sees a dramatic fall at the faculty level. She explained that our policies and action ought to be aimed ensuring that there isn't a fallout when it comes to higher education/academia & to get women to aspire for leadership. She spoke of the entire catchment of women that we must focus on, and very early in life.

Her talk also presented the profiles of men and women being innately different. This in turn reflects the diverse and complementary skills that men and women bring to an enterprise. Women bring

leadership skills that are often built on the basis of consensus and demonstrate immense empathy. This may differ from the way men typically lead, but it is for this reason to bring together these complimentary skills in decision-making and leadership processes.

She brought to light that there exist a multitude of presumptions and pre-conceived notions about women's capabilities, and the need of the hour is to re-evaluate these given the current scenario. Measures of success, especially in the sciences, prove to be more difficult than it does in disciplines such as trading and business, and this is also a reason why women go unrecognised. The answer to this is to set transparent benchmarks. In appealing to women's ideas and conceptions of their own abilities and identity in this environment, she questioned how women change things. Teach younger women to deal with and accept their own success graciously instead of being apologetic about it.

She noted that several effective measures have been designed and implemented by the Indian Government, which would help retain women in scientific enterprise. **This included:**

- Women Scientist Re-entry Scheme, which saw tremendous results (especially in the STEM fields),
- DISHA, a Department of Science and Technology (DST) scheme, which has special Post-Doctoral fellowships, measures to address the problems women scientists may have with mobility in order to pursue their research, encouraging and enabling the training of women to pursue alternate career paths.
- Bio-CARE, a DBT initiative.

She concluded by stating: "originality and creativity are rare, and no gender differences can be seen in these traits. Top research jobs call for a mix of skill, and we need both men and women to take charge of it. Science would be better served if we gave the opportunity to the gentle, the reflective and the creative individuals of both sexes and not just the 'Alpha Males'."

Following the inaugural address and the keynote speech, participants along the themes of the seminar presented papers. Below is the summary of papers as per the themes proposed:

THEMATIC PANELS:

The papers presented at the seminar covered issues related to following key themes: Setting the agenda for research in Women and Higher Education; Gender and academic orientation; Negotiating academic spaces; Research careers in industry: creating new spaces; Best practices for women in institutional spaces and the issue of research grants.

SETTING THE AGENDA: RESEARCH ON WOMEN & HIGHER EDUCATION

Dr. Gouri Srivastava encapsulated the policies of the State regarding higher education and specifically that of women, ranging from the year of Independence to the 12th Five-Year Plan (2012-2017). This also included the National Policy on Education (1986), the Programme of Action (1992), and the National Policy for the Empowerment of Women (2001): all of which summarily spoke of the improvement of quality in education, access to education, eradication of

illiteracy and discrimination, and promoting interdisciplinary research. The National Policy for the Empowerment of Women (2001) especially aimed at providing access to girls/women's education at all levels, reducing the gender gap in secondary and higher education, eliminating discrimination, creating a gender-sensitive curricula, and promoting the participation of women in Science and Technology (S&T) courses, and their vocational and technical skills.

This blends into the policy aims of the 12th Five Year Plan: creating new universities and increasing the intake capacity of the existing universities; bridging regional imbalances and disparities across disciplines; students intake, faculty enrichment, curricula and evaluation reform, revamping governance structures, greater emphasis on research and innovation by creating efficient regulatory framework.

Although the practical schemes to promote higher education amongst women (such as Day-Care centers in Universities and colleges, financial and academic support in the forms of Scholarships, Post-Doctoral Fellowships, Research Grants, Residential Facilities, Capacity Building measures for Women Managers, and Refresher Courses for women returning to higher education after a hiatus) – there still exist systemic, infrastructural and socio-economic challenges.

Prof. Karuna Chanana provided an extensive overview of changes in Higher Education, especially of women in higher education over the years. She presented data concerning Gender, choice of subject/specialisation and the push pull factors that contribute to these changes. The

data suggest that although India has seen tremendous growth in terms of women enrolment rates into higher education, they are still less represented in some subjects, specialisations, research, and the labour market. While enrolments have increased and women have experienced gender parity in higher education, they are still more likely to participate and graduate from humanities, social sciences and education while men are more likely to be graduating in computer sciences, physical sciences and engineering. Women also constitute not more a third of total faculty positions in any department of a University.

Tradition and change are simultaneously impacting the participation of women in higher education. The push factors vary across dimensions – at the economic level, the increasing participation of women reflects the growing higher education needs of a liberal economy aimed at growth and development; an expansion of the higher education system leads to a higher participation of women. In addition, Gender equality policies and affirmative action, wherever put in place, also pushed women into higher education. At the personal-familial level, education as the leveler of social inequities and for social mobility is critical resulting in rising aspirations of parents and of young women. Simultaneously, a girl's choice of subject to study would depend on various social considerations, the potential of that field in the labour market; this also determines her access to higher education in countries abroad and her value in the marriage market.

Prof. Anitha Kurup provided a comprehensive historical overview of key changes in participation and representation

of women (researchers) in science and technology in the country. She also provided key insights into some of the critical questions with regard to a lack of data and its impact on unpacking the significance of women and their participation in higher education. Her presentation highlighted the need to shift from the dominant framework of examining the low representation of women in specific fields like Physics and Engineering that focus on family and societal factors. The need to create alternative frameworks to enquire less obvious and less talked of reasons of why women are in small numbers in these disciplines. More importantly, she drew attention to the fact that the increased proportion of women in higher education and the STEM disciplines often do not translate to numbers in the faculty and leadership roles - an important issue to worry about. An often quoted reason by managements is that it is the lack of women applicants for faculty and leadership positions, a statement that has not been backed up by evidence.

Most research studies in the area of women and higher education focus on the problems rather than on successful experiences of women who have found varied and interesting solutions. There is a need to document and analyse for example the different ways in which women have build support systems to strike a work life balance. Unlike earlier, there are more younger women scientists with scientists spouses consciously choosing S&T institutions in smaller towns that may provide an equitable opportunity for both of them. In other words, there are fewer women scientists willing to sacrifice their scientific career for their spouses. Choices like getting married to men

outside science, opting for late marriage and deciding to have no children are being seen as new trends among the younger scientists. While this may not be true for a majority of women scientists who still have an arranged marriage involving the two families- the changing trend though among a few point to new possibilities.

She concluded her presentation with policy recommendations towards the need for efficiency in organizing and accessing data on women in higher education. Higher education policies need to reflect the fact/reality that women scientists are not a homogeneous group. Serious and long term research studies are needed to generate the data required to capture the nuances of the under representation of women in leadership roles.

GENDER AND ACADEMIC ORIENTATION: ARE DISCIPLINARY BOUNDARIES A LIMITING FACTOR FOR WOMEN IN HIGHER EDUCATION?

Dr. Vineeta Bal, in her presentation of women pursuing higher education and research in the biomedical sciences, explains that most women in the field are nudged into choosing 'soft jobs' - teaching, working from home, and choosing a field suitable to the husband's specialisation OR getting re-trained for alternatives. Very often these are not informed choices and taken independently. How do women break these stereotypes and learn to negotiate to follow a career of their passion and their capability?

Dr. Mythily Ramaswamy, in her talk exploring the myth that women only pursue certain kind of science and research, noted that not many women opt for mainstream science research but often take up less

challenging research or teaching positions. She Emphasised the point that when the numbers of women are less in a field, for a new entrant it is quite difficult to find a mentor and a supportive peer group. This should be a factor that must be looked into when initiating changes – mentoring and support.

NEGOTIATING ACADEMIC SPACES

Dr. Sumati Surya, spoke of survival in an academic environment, and the challenges of creating one's own intellectual space and identity. She spoke of how the hands of gender discrimination make it through to most processes – interaction with peers, student interviews, faculty interviews, and access to resources such as grants, travel opportunities and chance to serve on important committees. It is important for women to call discrimination when they see it! She also emphasised the need to create informal intellectual spaces – outside the formal academic environment; could include collaborations with outsiders or discussions with other groups, etc.

The origin of Women Universities was yet another topic of discussion. Prof. Vibhuti Patel summarised that establishment of women's universities aimed to facilitate the process of understanding, recognizing and giving due importance to the contributions made by women and men, to empower women to attain gender justice and an effective role in all decision-making processes; to ensure visibility of women as change agents for the enhancement of the status of women; to organise seminars, workshops, debates, talks and discussions to keep women's concerns centre stage in

the public domain, and fundamentally to identify and understand roots of inequality that result in invisibility, marginalisation and exclusion of women from the intellectual world.

RESEARCH CAREERS IN INDUSTRY: CREATING NEW SPACES?

Dr. Vaijayanti Gupta, co-director of a life sciences company, spoke of the need for change in both social-attitudinal and industry-specific outlook about women in leadership through the proactive drafting of policies. This would include conscious efforts in recruitment to eradicate bias and stereotypes, inclusion of women in decision-making, and the understanding of family and health issues.

Dr. Gopal Mahapatra also emphasised the importance of having supportive and practical mentors, and revamping talent identification processes to eradicate subtle but pervasive gender bias in expectations of what makes a leader.

BEST PRACTICES FOR WOMEN IN INSTITUTIONAL SPACES: THE ISSUE OF RESEARCH GRANTS

Dr. Renu Swarup, Adviser to the Dept. of Biotechnology, Government of India presented the initiatives taken by their department that are aimed at improving and supporting women's participation and leadership, through fellowships, awards, and research grants (some of these are especially aimed at women scientists in small research laboratories or unemployed women scientist after a career break so as to help them undertake independent R&D projects.) The details of the new BioCARE – Women Scientists' Career Development Scheme were discussed.

Dr. Vinita Sharma presented the policy measures and aims of DISHA- a government initiative that is designed to provide an integrated enabling and supportive framework for gender mainstreaming of Women in Science, Technology and Innovation. These programs were established at various levels of education – high school, graduate, post-doctoral, faculty and entrepreneurial support for women in the science and technology disciplines. A new initiative to increase mobility opportunities & thereby retain employed women scientists in the S&T sector is shortly to be launched. It proposes to create 1000 contractual positions with portability within India for creating opportunities for overcoming lateral entry challenges for women.

WAY FORWARD (KEY POLICY RECOMMENDATIONS):

- Need for better articulation of the role of women and gender balance in society as a whole; much of the articulation is about the problem, and much less about the solutions and intellectual depth of change that is required.
- Documentation and analysis of women's experiences of making choices of work-life balance that can provide key pointers for the women in their early career.
- Introducing Gender Sensitisation as an important component in all Capacity Building Programmes within institutions and organisations.
- Offer funds to institutes and labs that develop creative approaches to improve institutional climate, recruitment and retention of women in science and engineering.
- Inclusive hiring practices with a focus on gender parity - diverse and complementary skills that men and women bring to an enterprise and set transparent benchmarks in academia, to ensure that women scientists' success are recognised.
- Need for informal intellectual spaces for women: one has to create one's own space – collaborations with outsiders, discussions with people who aren't gender biased, these intellectual conversation-space is important, and crucial to the survival in academia.
- Administrative Reforms that need to take place: Institutions that discourage linked appointments (husband and wife); means to inculcate gender sensitivity within an institutional setup.
- Gender Budgeting for institutional support, societal development (inclusive development; women as agents of change), for mobility of women academics.
- Networking and training needs (create more innovation clusters that train women in preparing for a career in academia or the industry).
- Need for research to analyse what causes this tremendous drop-out between young women scientists and those who are involved in actual product development/ any practical application.
- Address institutional (infrastructural) and systemic barriers, and not use personal and familial reasons as current factors that keep women out of the field.
- A small critical mass of scientists keep making it back into committees, resulting in a drop in the quality of

these committees; we should be global in allowing women scientists from all over the world into our committees (promotion committees, advisory boards, etc.) as they bring in diversity and put pressure on our management to look at the other views that can be implemented rather than our steady ones.

- Need for study of women's education, particularly that of higher education and to link research with policy.
- Differences in perception regarding why women leave science. Policy to move from 'one size fit all' to separate policies to address individual groups.
- Help women develop networks. Additional travel grants for women, mentoring programmes organised at sidelines of conferences, honing networking skills etc.
- Higher proportion of women in research spends more time at work compared to men in research. Support needed through flexi-timings, work from home options through online access, security and transport for late hours of work, etc.
- Disabling organisational factors- lack of opportunities/ promotion / advancement, role models & mentors. Harassment, discrimination evident. Childcare facilities at workplace needed.
- Need to re-evaluate the 'Male model' of science that we still operate on - this explains the tendency to view women scientists as not 'true' scientists as they do not spend as much time immersed in research work, and further nurture stereotypes of women as all-sacrificing for their families.
- Collection of data by the institute/lab from their women faculty and research scholars on perceived biases, on appointment, promotion, administrative position, space, funds, research scholars, facilities.
- Gender Audits: Institutions should give information on fraction/distribution of women in faculty, students etc.
- Women scientists may benefit from schemes that help entry/retention rather schemes that promote to bring back women who leave science.

ABOUT THE EDUCATION PROGRAMME AT NIAS:

The Education programme at NIAS is a consolidation of work in various projects and academic activities conducted at the institute over the past decade. Drawing on a range of experiences, the Education programme is premised on observations that the education system in India, at all levels, is entrapped in several contradictions. On the one hand, mass elementary education remains limited with problems of access, equity and quality, while on the other hand, select specialised institutions of higher education are celebrated for the generation of creative and global talent. Even as existing institutions face a crisis in management and quality, several new, private institutions are catering to differential financial capabilities of households. The challenges are multiple: how to provide equal and quality education to all? What models and practices of education are suitable for a diverse population? How can local and national

priorities be matched with the pressures of global regimes? And, what linkages must education institutions have with the social, political and economic worlds of the people? Attempting to address these challenges and drawing on the institutional mandate of inter/multidisciplinarity, the Education Programme focuses on linking research, teaching, advocacy and policy. In our approach of “reaching the unreached”, we draw our attention to the education of gifted children, questions of gender in education and the education of Adivasi (tribal) communities. Our work has found audience in diverse forums including academic journals, national and international conferences, teach-ins and fact-finding committees among others. In addition to the scholars from around the world, we have collaborated with students, teachers, administrators, government officials and civil society organisations.

ACKNOWLEDGMENTS

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and *Research: Dilemmas and New Directions*. We also acknowledge the contribution of Dr. Sindhu Radhakrishna in conceptualising the conference of *Women in Higher Education and Research: Dilemmas and New Directions*. We are thankful to Reni George, Rashmi M., Sumitra Sunder, Priya Gupta, Namitha Kumar and NIAS administration for their support during both conferences.

ANNEXURE:

Annexure 1: Program Schedule of the seminar on 'India's Higher Education: Dilemmas and New Directions', April 04 - 05, 2013.

DAY 1: THURSDAY, APRIL 4, 2013

9:30 am to 10:45am	<u>INAUGURAL SESSION</u>
Welcome:	Prof. V. S. Ramamurthy, Director, NIAS
Keynote Address:	Prof. C.N.R. Rao, Honorary President, JNCASR <i>Higher Education in the 21st Century: Challenges and Opportunities</i>
10:45 am to 11: 15 am	HIGH TEA
11:15am to 12:30 pm	<u>PANEL 1: EXPANSION EQUITY AND EXCELLENCE</u> Moderator: Dr. Shivali Tukdeo, NIAS Dr. Ashwin Kumar , Tumkur University, Tumkur <i>Universities, Knowledge Production and Participation</i> Prof. Anitha Kurup , NIAS, Bangalore <i>Inclusion: Gender, Caste, Language</i> Prof. Virginius Xaxa, TISS, Guwahati Adivasi/Tribal Aspirations and Higher Education
12:30 pm to 1:30pm	<u>PANEL 2: RESOURCE GAPS AND UNEVEN STRUCTURES</u> Moderator: Prof. Anitha Kurup, NIAS Prof. M.S. Ananth , Former Director, Indian Institute Technology, Chennai Innovations in Engineering and Technology Education Dr. Saumen Chattopadhyay , Jawaharlal Nehru University, New Delhi Social Science Research Funding: An analysis of Key Issues
1:30 pm to 2:30pm	LUNCH

- 2:30 pm to 3:45pm **PANEL 3: INDIAN HIGHER EDUCATION AND GLOBALISATION**
Moderator: Prof. Carol Upadhyia, NIAS
- Prof. Karuna Chanana**, Jawaharlal Nehru University, New Delhi
Globalisation, Higher Education and Gender
- Dr. Shivali Tukdeo**, NIAS, Bangalore
Students on the Move: Transnationalisation of Indian Higher Education
- Dr. S. Srinivasa Rao**, Jawaharlal Nehru University, New Delhi
Fee Re-imbursment Scheme in AP: Welfare Measure or Neoliberal Move?
- 3:45pm to 4:15pm TEA BREAK
- 5:00pm to 6:00pm Public Lecture
 Prof. Gopal Guru, Jawaharlal Nehru University, New Delhi
 Higher Education and Social Exclusion
- Moderator: Prof. Anitha Kurup, NIAS
- DAY 2, FRIDAY, APRIL 5, 2013
- 9:30am to 10:30 am **INSTITUTIONS, POLICIES AND NEW KNOWLEDGES**
 Moderator: Dr. Shivali Tukdeo, NIAS
- Plenary Session
 Prof. J.B.G. Tilak, NEUPA, New Delhi
Institutions and Policies: New Directions
- 10:30 am to 11:00am TEA BREAK
- 11:00 am to 12.30pm **PANEL 1: PRIVATE ACTORS IN EDUCATION**
 Moderator: Prof. Anitha Kurup, NIAS, Bangalore
- Prof. R. Sethuraman**, VC, Sastra University
Sastra University- Model, Rationale and Road map
- Dr. Ravi Kumar**, South Asian University, New Delhi
Neoliberal Predicaments in Indian Higher Education
 Dhanwanti Nayak, Manipal University, Manipal
 The Pitfalls of Privatisation of Higher Education
- 12:30 pm to 1:30pm LUNCH

1:30 pm to 2:45pm

PANEL 2: ONGOING RESEARCH PRESENTATION BY
DOCTORAL STUDENTS

Moderator: Dr. Ashwin Kumar, Tumkur University

Gaurav Jogi Pathania, Jawaharlal Nehru University, New Delhi
*Identity Based Networks and the Emergence of 'New' Student Movements
on University Campuses: Analyzing JNU and Osmania*

Syeda Jolly Kazi, Jawaharlal Nehru University, New Delhi
Higher Educational Choices and Credentialism Dimension

Chetan B. Singai, NIAS, Bangalore
Issues in Governance of Higher Education

2:45 pm to 3:15pm

TEA BREAK

3:15 pm to 4:15pm

Way Forward: Recommendations
Prof. Anitha Kurup, Dr. Shivali Tukdeo

5:00pm to 6:00pm

Public Lecture:
Shri. Pawan Agarwal, Adviser (Higher Education), Planning
Commission, GOI
12th Plan and Beyond: The Future of Indian Higher Education

Chairperson: Prof. V.S. Ramamurthy, Director, NIAS

ANNEXURE 2 Program Schedule Seminar on “Women in Higher Education and Research: Dilemmas and New Directions”, June 20 - 21, 2013.

DAY 1: JUNE 20TH, 2013

Time	Sessions and lectures	Speakers
9.00 - 10.15 am	<u>Inaugural Session</u>	
9.00 - 9.10 am	<i>Welcome speech and Introduction</i>	Dr. Anitha Kurup, NIAS, Bangalore
9.10 - 9.20 am	<i>Inaugural Address</i>	Dr. K. Vijay Raghavan, DBT, New Delhi
9.20 - 10.15am	<i>Keynote address</i>	Dr. Vijayalakshmi Ravindranath, IISc, Bangalore
10.15 - 10.45 am	TEA	
10.45 – 12.30 pm	<u>Session I</u> Setting the Agenda: Research on Women & Higher Education	Moderator: Dr. Vineeta Bal, NII, New Delhi
10.45 - 11.10	<i>Women Participation in Higher Education and Research : A Historical Overview</i>	Dr. Gouri Srivastava, NCERT, New Delhi
11.10 – 11.35	<i>Gender Representation in Higher Education Today: What Do the Numbers Tell Us?</i>	Prof. Karuna Chanana, Formerly with JNU, New Delhi
11.35- 12.00	<i>Interrogating Higher Education: Changing Paradigms</i>	Dr. Anitha Kurup, NIAS , Bangalore
12.00-12.30	<i>Discussion</i>	
12.30- 1.30 pm	LUNCH	

Time	Sessions and lectures	Speakers
1.30 - 3.15 pm	<p align="center">Session II</p> <p align="center">Gender and Academic Orientation: Are Disciplinary Boundaries a Limiting Factor for Women in Higher Education?</p>	Moderator: Dr. Shobhana Narasimhan, JNCASR, Bangalore
1.30 – 1.55 pm	<i>Was it a Rocky Road?: Pursuing a Career in Science and Medicine</i>	Dr. Vineeta Bal, NII, New Delhi
1.55 – 2.20 pm	<i>Women do only certain kind of Science: Myth or Reality?</i>	Dr. Mythily Ramaswamy, TIFR, Bangalore
2.20 – 2.45 pm	<i>Is My Gender Relevant For My Competence?: Women Professionals in the Social Sciences</i>	Dr. Rupamanjari Ghosh, JNU, New Delhi
2.45 – 3.15	Discussion	
3.15 - 3.45	TEA	
3.45 – 5.30 PM	<p align="center">Session III</p> <p align="center">Negotiating Academic Spaces</p>	Moderator: Prof. Karuna Chanana
3.45 – 4.10 pm	<i>Does My Field of Study Give Me an Edge?: Debating Disciplinary Choices</i>	Dr. Sumati Surya, Raman Research Institute, Bangalore
4.10 – 4.35 pm	<i>Big-Fish-Little-Pond: Does the Size of the Institution Matter?</i>	Dr. Ram Ramaswamy, VC, Central University, Hyderabad
4.35 – 5.00 pm	<i>From Feminist Studies to Women Universities: What Does the Future Hold?</i>	1. Dr. Vibhuti Patel, SNDT Women's University, Mumbai
5.00- 5.30	Discussion	
6.00 – 6.30	TEA	
6.30 - 7.30 pm	<p align="center">Public lecture</p> <p align="center"><i>'Women composers of India'</i></p>	Moderator: Dr. Anitha Kurup Dr. Shakuntala Narasimhan

DAY 2, JUNE 21ST, 2013

9.00 – 11.40 am	<u>Session I</u> Research Careers in the Industry: Creating New Spaces?	Moderator: Dr. Geetha Vani Rayasam, CSIR, New Delhi
9.00 – 9.25 am	<i>The Road Less Travelled: Moving Beyond Academia</i>	Dr. Malathi Lakshmikumaran, Lakshmikumaran & Sridharan Attorneys, New Delhi
9.25 – 9.50 am	<i>The Industry as a Career Choice</i>	Dr. Vaijayanti Gupta, Strand Life Sciences, Bangalore
9.50 – 10.20 am	TEA	
10.20 – 10.45 am	<i>Being a Woman Entrepreneur: Is the Benchmark Higher?</i>	Dr. Anuradha Acharya, Ocimum Biosolutions, Hyderabad
10.45 – 11.10 am	<i>Is the Industry a Preferred Destination for Women?</i>	Mr. Gopal Mahapatra, Oracle, Bangalore
11.10 – 11.40am	<i>Discussion</i>	
11.40 - 1.00 pm	<u>Session II</u> Best Practices for Women in Institutional Spaces: The Issue of Research Grants	Moderator: Dr. Vibhuti Patel, SNDT, Mumbai
11.40 – 12.05 am	<i>Women-Specific Policies: The DST/ DBT Experience</i>	Dr. Vinita Sharma, SEED, DST, New Delhi
12.05 – 12.30 am	<i>Do Gender-specific Funding Programmes Aid the Quality of Research in the Country?</i>	Dr. Renu Swarup, DBT, BIRAC, New Delhi
12.30 – 12. 55pm	<i>Assessment of Research Capabilities of Men and Women</i>	Dr. Javed Alam, Former Chairman, ICSSR, New Delhi
12.55 – 1. 30 pm	<i>Discussion</i>	

1.30 – 2.30 pm	LUNCH BREAK	
2.30 - 4.15pm	<u>Session III</u> Best Practices for Women in Institutional Spaces: The Issue of Work Policies	Moderator:
2.30 – 2.55 pm	<i>Women in Elite Institutions</i>	Dr. Namrata Gupta, IIT Kanpur
2.55 – 3.20 pm	<i>Work Practices in the Industry: Are They Gender- specific? Do They Help?</i>	Dr. Geetha Vani Rayasam, CSIR, New Delhi
3.20 – 3.50 pm	<i>Discussion</i>	
4.00 – 5.00 pm	TEA & POSTER PRESENTATIONS	
5.00 - 5.20 pm	Valedictory Address	Prof. V.S.Ramamurthy, Director, NIAS
6.00 – 6.30 p.m.	TEA	

