

**Gender Issues as Focused in
NCF 2005 with reference to
Secondary School Textbooks of
Andhra Pradesh**

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March 2007

Acknowledgement

I sincerely thank NCERT for approving the programme '**Gender Issues as focused in NCF 2005 with reference to Secondary School Textbooks of Andhra Pradesh**' and the then Principal of RIE, Mysore Prof.G.Ravindra, presently Joint Director of NCERT, New Delhi for handing over the programme to me for execution.

I also thank the Director and staff of SCERT, Hyderabad for providing all support.

My sincere thanks are to the Principal, faculty and staff of IASE, Sanskrit Vidyapeet, Tirupathi for making arrangements for academic discussion and accommodation of the resource persons.

I am extremely grateful to all the resource persons and my colleagues for their untiring efforts in analyzing the textbooks and reporting.

I have no words to express my gratitude to the girl students from A.P. studying in III year B.Sc.Ed. (2007-08) for sparing time during their study holidays to copy the report of Telugu version of the textbooks neatly.

My thanks are to the CPU staff and Principal, RIE, Mysore for bringing the report to light.

C Jangaiah

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INTRODUCTION

Men and Women are the two wings of the same bird. As the bird cannot fly with one wing, so the society cannot be developed unless men and women are equally developed.

- **Swami Vivekananda**

India is a welfare State and according to its Constitution, men and women have equal rights to all State resources. Education is one of the welfare measures and plays an important role in bringing about gender parity. According to National Policy on Education (1986) revised in 1992 suggests in its Programme of Action to prepare a concrete action plan addressing gender related concerns. Two of the major concerns are girls' enrolment in schools and gender issues in school textbooks. Though governments have taken up several intervention programmes to strengthen the education of the girl child, the percentage of girls in comparison to boys according to 2002 data in classes XI to VIII is 43.93 and in classes IX and X is 41.44. With regard to gender issues in textbooks, it was a felt need to analyse the textbook as gender had been accorded significance in the curriculum review process.

The following pages of Focus Group Report on Gender Issues in Education of NCF 2005, clearly indicate the gender issues and the role of education in empowering girl child.

With this the programme was taken up with title "**Gender issues as focused in NCF 2005 with reference to secondary school textbooks of Andhra Pradesh**" in two different phases.

Phase I : The objective of Phase I workshop was to develop a format to analyse the textbook. The programme was held at RIE, Mysore for three days during February 2007. The resource persons were drawn from universities and schools of Karnataka and Andhra Pradesh. They thoroughly studied the Focus Group Report on Gender Issues in Education of NCF 2005. Selected part of the report is given in following pages.

FOCUS GROUP REPORT ON GENDER ISSUES IN EDUCATION

Introduction

Gender is not a women's issue; it is a people's issue. "Femininity" does not exist in isolation from "masculinity". The construction and power of one determines the construction and power of the other. Gender relations are neither "natural" nor given, they are constructed to make unequal relations seem "natural", and can be naturalized only under the duress of socialisation. Thus there is undue pressure on boys and girls to live up to the established "norms" of masculinity and femininity. While girls endure unwarranted social control, discrimination and domination, boys too suffer from the stereotyping that exists in a patriarchal culture. Discouraged from being emotional, gentle or fearful they are thrust into the role of breadwinners, protectors, and warriors. Thus - unequal gender relations stunt the freedom of *all* individuals to develop their human capacities to their fullest. Therefore it is in the interest of both men and women to liberate human beings from existing relations of gender.

The Focus Group on **Gender Issues in Education** started work with genuine appreciation of the fact that, with the setting up of a specific focus group devoted entirely to this issue, gender had been accorded significance in the current curriculum review process. However, there was also discomfort and apprehension. Discomfort that the members of the group were all women. And apprehension that gender concerns could be excluded by other focus groups from their areas of concern to be relegated solely to this group, that

once again gender could be marginalized as a "women's issue". Fortunately, beginnings do not always foretell the end of the story, specially not if it is a thought-provoking one, which is what we hope the story of gender issues in this curriculum review will turn out be.

In our view, gender cuts across all disciplines, is basic to the construction of knowledge and has pervasive and wide-ranging implications for human relations in general and education in particular. So we came ready to bear the characteristic "double burden" - this time of doing our work on the home ground of our own team, as well as of interacting constantly with the groups working on other aspects of society and culture, and on various disciplines. It has been hard work: from the nine page concept note on gender that we sent out to all the Focus Groups and the Steering Committee in the first month, through the specific recommendations relating to the concerns of each Focus Group that went out in the second, to the persistent discussions at an NCERT meeting in Delhi, and with chairpersons of Focus Groups and Steering Committee members at their meet in Hyderabad, as well as the sustained engagement with the drafting committee in the third month.

All this was done in addition to holding three consultations of our own that included sessions with local academics, activists and teachers, at the NCERT, Delhi, the Homi Bhaba Centre for Science Education in Mumbai, and the School of Women's Studies at Jadavpur University, Kolkata: reaching out to scholars and activists across the country who have experience in issues of gender in a wide range of fields and disciplines, requesting their written

inputs; and finally compiling a paper written by over 25 people, with verbal inputs from at least 30 more.

It has been hard work, but the responses have also given us cause for hope. Professor Krishna Kumar, the director of the NCERT set the intellectual orientation of the entire review process in the direction of meaningful and substantive transformations; this created a ground conducive to our interventions. He not only lent full support to the efforts of this team, but also encouraged and facilitated the initiation of dialogues on issues of gender between members of this group and others. Chairpersons and members of many of the focus groups, as well as members of the steering and drafting committees too, engaged with us on various issues of gender relating to the aims of education, the construction of knowledge, Identity, learning and pedagogy, curriculum, teacher education, language, mathematics, health, habitat, work and education, early childhood education, and the education of SC and ST children. We hope that, just as each of these concerns have found place in our thinking, so too gender will find place in the reflections and recommendations of specific focus groups as well as in the final policy recommendations.

The Focus Group on Gender Issues in Education comprised members from a wide range of backgrounds - from Vadodara to Kolkata and Sitapur to Mysore, from education activists, rural as well as urban, to scholars from the fields of Education, Mathematics, Science Education, Sociology, Literature and Women's Studies, from schoolteachers to NCERT personnel. The range of

representation augured for extremely rich discussions, but also some hard-hitting confrontations, the import of which cannot be adequately captured in the formal lines of a position paper, hence must find place here.

Sometimes, during our most exciting interchanges regarding contemporary challenges and possibilities, we would find a colleague, with experience of the workings of rural schools in Uttar Pradesh, sitting tense in the throes of a deep contradiction - the expression in her eyes signaled her intellectual involvement in the discussion, but her tight lipped silence sliced right through our impassioned exchanges. "What is the point of envisioning any of these possibilities, when I know that there is not even one classroom per class in the government schools I know in my area? How can you expect the teacher, to teach, or a student to learn anything in such a context?" would be the grim question at the end of our discussion. Or, "Do you know that there are hundreds of TV sets gathering dust in educational institutes in Uttar Pradesh, because they have not even been connected?" Or a school teacher colleague would intervene. "Do you know how many girls in rural areas drop out of school because it is too far, or because the teaching is so poor in the free government schools that it is impossible to pass without getting private tuition? Most parents try to pay for their boys to attend the better private schools. and won't fork out private tuition fees for girls even if they manage to spare enough for boys - after all boys are seen as the future breadwinners, so must be educated. So where do the girls go? To the religious schools that circumscribe them further within repressive gendered mores."

At times like this we realized that none of our recommendations, if implemented, could ensure even a basic secular education for the majority of girls in this country. There is absolutely no point in talking about transformation in textbooks and in the curriculum and pedagogy, if basic conditions for ensuring girls' access, infrastructure and standard of education do not exist. The fragile hope that these three months of intense deliberations, as well as those of the decades preceding them, will bear any relevance to the education, of the majority of girls in this country rests in the implementation of our first two recommendations at the end of this paper:

- 1) *Access to Education for All Girls:* The government must be impressed upon to spend more on education. Nothing short of *free and quality education for all* and the provision of *accessible schools* for girls in every area of the country, will ensure that all girls gain equal access to education.
- 2) *Retention and Quality of Girls' Education:* Government schools are increasingly becoming centres of poor quality education for the marginalized sections of society, specially girls, which in turn is connected to the high dropout rates of girls. Hence the *infrastructure and quality of teaching in government schools* must be *brought up to the mark*.

Another important concern that also emerged in the context of institutional provisions was regarding the isolation of educational research and training institutes from the significant research done in Women's Studies centers and schools in universities, as well as from the impressive scholarship' on gender that is now at the forefront of almost every discipline of study in academia,

internationally, and in India too. It is a matter of serious concern that virtually none of this research finds any place in disciplinary education in schools. Hence we emphasize the importance of the following, our seventh recommendation:

- 3) *Integrate Input of Women's Studies Research in Textbooks, Syllabi and Training:* The NCERT, as well as the SCERTs in each state, should develop formal linkages with centres and schools of women's studies in universities, as well as with individual scholars and activists who have experience of working on gender issues in different disciplines. Joint programmes, funded by the NCERT and SCERTs, should be set up with a view to deriving inputs from research done in women's studies, and to *jointly preparing material, informed by a critical and pro-active approach to gender, for textbooks at the primary, middle and secondary levels. Women's Studies academics and researchers should also be invited to shape the formation of syllabi and content of different disciplines, as well as of teacher training programmes.*

Of this impressive body of women's studies scholars and activists, both from women's studies centers, as well as those engaged in research on gender in different disciplines, many have demonstrated their unstinting solidarity by contributing to the work on gender issues for this curriculum review process. We cannot thank them, for they are committed to the work of transformation towards a more just and equal world as much as we are. We can only place on record their contribution and celebrate this solidarity. No less than ten scholars

actually contributed to this paper in writing. Their names are included in the list of contributors at the beginning of this paper; however, in keeping with the collective spirit of this work, their specific inputs have not been acknowledged in the relevant sections. Professor Vina Mazumdar, pioneer educationist and scholar of the women's studies movement in India, who has continued to inspire, urge and sustain us with her intellectual leadership for more than three decades now, Professor Jasodhara Bagchi, founder director of one of the first and most active Women's Studies Schools in the country, and Malini Ghosh, untiring feminist activist, all took time out of their busy schedules to give us valuable comments on the final draft of the paper. Professor Shefali Moitra, Director, School of Women's Studies, Jadavpur University, Kolkata and Professor Arvind Kumar, Director, Homi Bhabha Centre for Science Education, Mumbai, made it possible to hold consultations of the Focus Group at their centers. Shri Homkar, Principal, Bhinar Ashram Shala, Bhinar, hosted us during our visit to the Bhinar school. The following scholars, activists and researchers participated in our consultations: in Delhi, Anita Rampal, Vimala Ramachandran, Uma Chakravarty, Gouri Choudhury, Usha Nayar, Swati Awasthi, Ishani Sen, Bharati Roy Chowdhury and Prabhat; in Mumbai, Chayanika Shah, Sonal Shukla, Nandita Gandhi, Razia Patel, Lalita Prabhakaran, H.C. Pradhan, Arvind Kumar, Swati Mehrotra and Ritesh Khunyakari; and in Kolkata, Sudeshna Sinha, Rita Gomes, Mina Das, Chilka Ghosh, Shefali Moitra, Samantak Das, Nilanjana Gupta, Malini Sur, Satya Gopal Dey, Janaki Nair, Nandita Ray, Sushmita Ghosh and Sonalika Ghosh.

In Delhi, Disha Nanwani, Kashyu Gulati, Poonam Batra, Indu Agnihotri, C. Suvasini, Shirley Joseph, Sapana Arora and D. Bhavana contributed to the section on teacher training, and Prasanna provided valuable support in typing and feeding in corrections. The sincere and generous contributions of all these people, as much as the concerted efforts of the members of this group, reflects our joint expectations of a dynamic and pro-active approach to gender in education policy.

Existing Approaches to Gender. Equality and Empowerment

For three decades gender has been accepted as a category in the formulation of policy and curricula frameworks in India. "Gender", "Equality" and "Empowerment" of girls have also been used as key words in educational documents for long as it is evident from the policy review section.

An important question to be raised is - what have been the limitations of our approach and efforts in formulating curricula policy, textbook rewriting and practices in the classroom.

Gender has primarily been viewed

- As concerning only girls and women (a biological category)
- As an isolated category. not related to other issues
- In terms of provision of equal facilities

Gender is not just a women's issue . . . It's a people's issue.

Equality as a goal, strategies adopted have focused on

- Increasing representation of these notions of gender in educational material
- "Sensitive" portrayals of discrimination that girls/women face

- Portraying positive role models and enacting role reversals of stereotypes
- Neutralizing texts of any gendered references
- The formal or *sameness* approach that focuses on equal *treatment* rather than equality of outcome

Parity has been the major objective, not just in terms of enrolment or retention of girls, but also in terms of the curriculum and content. Equality, in this *formal* approach, is seen as mere parity or identical treatment across gender. Parity is a concept that deals with boys and girls being offered equal access to school, equal facilities, and even equal representation in the curriculum and textbooks, but all in numerical and formal terms. Such identical treatment dictates that all practices be gender neutral and of "single standard" which is usually the dominant standard, based on male experiences and interests. As a result there is an additional burden on girls to achieve male standards, when in fact the social reality and financial support available to them is not similar to that of boys. Disadvantaged by gender roles, responsibilities and resources, only very few and privileged girls are likely to achieve male standards.

Thus the distinction between parity, or *formal* equality, and substantive *equality* is critical. Substantive gender equality in education is a more complex notion that relates to the nature and quality of education, and has to focus on how education can enable girls to exercise their choice and claim their rights. The aim of education committed to gender equality cannot be merely to

provide girls equal access to education, because there is a world of difference between the equal right to education and the right to equal education.

Empowerment of girls, another goal, has been perceived empowerment has been understood merely in instrumentalist ways as education for effective implementation of

- better hygiene
- the two-child norm and population control
- informed "mothering" of future Citizens of the nation
- upholding "tradition" and spiritual values, and improving social cohesion
- supplementary income generation

Locating women and girls solely within the family, and represents the functional roles they play as homemakers, mothers of future citizens, bearers of traditional and spiritual values, and supplementary income-generators, rather than focusing on the self-actualization of girls and on developing their cognitive, creative and critical abilities. This approach effaces their very identity and rights as autonomous human beings:

c. Impact on Textbooks and Curricula

Textbooks: Reflecting the limits of existing approaches: The NCF 2000, without doubt, was a huge step backwards from the National Education Policy (1986). The latter saw education as, "an agent of basic change in the status of women", "The National Education System", it argued, "will play a

positive, interventionist role in the empowerment of women." But we need to assess the impact of its progressive policy rhetoric on textbooks. Did gender get portrayed in a manner that was significantly different from past representations of women and girls?

A thorough analysis of every subject taught at each level in schooling process both in the 80's and 90's did show glaring sexist bias in the textual content, the number of illustrative themes that favoured boys as being active and girls as merely passive roles, restricted mostly to domestic contexts.

Initiatives to remove sexist bias in textbooks undertaken in the last decade or so are played yet again by their limited understanding of gender and equality. One strategy was to attempt quantitative equality by increasing visual representation of girls and women. Another was to facilitate 'role reversals', in order to depict equality amongst the sexes. "If men can do it, so can women" - this mode was used to justify changes in content. As in showing or writing about men making tea, while women read the paper. Textbook writers made visible the achievements of women without any thought to how the very concept of writing accounts of great men's lives needed rethinking. Therefore, women fought great battles like men. Children read equally masculine, militaristic accounts of women's lives. Rani Durgavati, Razia Sultan found their place not just in history but in language textbooks. Though even here the same prowess was not accorded to them. Exceptional women like Rani Jhansi and Madame Curie

were still defined by their domestic roles - textbook writers were careful to point out that that despite everything they continued to perform their domestic roles.

The picture is not very different at the state level. In a study of school texts in West Bengal, for example, it was seen that women were "generally portrayed as passive, dutiful and confined to the home. Like the peasants and manual labourers, women are shown as largely powerless. The curriculum and textbooks served to maintain the status quo in the larger socio-cultural context in the state.

The picture that emerges is that despite valuable experiences and insights gained from the public literacy campaigns of the 1970s and 1980s, explicit policy commitments, and considerable effort at producing materials that is empowering for girls and women, the problems persist. This is because traditional meanings of the masculine and the feminine continue to persist along with other oppositional, dichotomous categories of active-passive, emotional- rational, nature-culture and dependent-autonomous. There was no reconceptualisation of curriculum informed by an awareness of how gender is positioned within discourses of knowledge production and its relationship to social power essential in addressing these issues. Such a reconceptualisation would have necessitate attention to form, approach and content of the textbooks and curricular transaction, whether of the languages, the sciences, social sciences or mathematics.

*The Hidden Curriculum - Beyond tokenism:-*A curriculum encompasses the essential and appropriate knowledge taught in schools. It involves the praxis of

policy as well as the syllabi used in the teaching-learning process. Teaching and learning materials, classroom practices, evaluation and assessment procedures and language policy are all components of curriculum are 'learned' in school demands investigation of the contexts within which the children make meaning of, or responds, to these notions, through the filter of her/his subjective experience growing up female/male in society. While it is important to understand the ideologies underlying the presentation of gender in school textbooks, it is equally pertinent to examine how these ideologies are expressed at the level of everyday school practices and experiences, through what is often termed the 'hidden' curriculum.

What is the hidden curriculum of gender in schools?

Organisational arrangements (including the division of physical spaces within the classroom and the school along lines of gender).

Differential task assignment and sexual division of labour in school (boys allowed to go out of school, girls sweep and clean).

Routines, rituals and practices in everyday school life (like segregated seating separate lines for girls and boys, or having them form separate teams).

Systems of rewards and punishments, disciplining of boys and girls through different strategies, teacher's labelling patterns, teacher-student and student-student interactions.

Within the paradigm of "objectivity", the school is largely organized on the assumption that "learning" is separate from the rest of children's lives. The dominance of a textbook culture has meant that teachers begin teaching

not with what the children know or have experienced but with what they do not know and have not experienced. It is not surprising for classroom knowledge to assume an independence from the child's own experiences and knowledge of the world. This dichotomy often results in a tendency among children to compartmentalize their knowledge - that which has relevance in school and that, which is used and is relevant outside the school. As a result, the child is unable to relate to what is taught in the school and this is often reflected in rote learning and low learning achievements.

The Male Middle: Class Bias: Our thinking on curriculum - needs to begin by acknowledging the ground reality: large numbers of children from lower class and caste groups are today accessing the formal educational system. The irony of the present moment though is that this changed constituency in the educational system is not factored into thinking -about curriculum. Ever since the Kothari Commission Report of 1966 emphasized the processes of nation-building and modernization, the assumption of the male child as the prime mover of national-development has tended to dominate both thinking in relation to the school curriculum, as well as its translation into the language and ideology of textbooks.

Further, there is another problem that has critically contributed to the male-centrism of curriculum: Textbooks have presumed a sensibility and logic that meshes most easily with the knowledge-world of the urban middle class male child. The image of the child who can be disciplined to become the ideal citizen and a national asset dominates curriculum planning. It is the male

middle class child again who comes closest to conforming to the hegemonic notions of ideal childhood, one in which the child is in school and not at work, is carefree, at play and sheltered from the sordid facts of adult life. Curriculum documents have therefore, addressed the upper caste-urban middle class child (invariably male) and in turn are shaped by the norms of the world inhabited by this child. There is however, no match between the conditions of ideal childhood and the responsibilities and struggles of the large majority of the children found in government schools and in rural areas. Their life bears little resemblance to the life of the middle class child.

On the rare occasion when the child from the lower class is invoked, there is neither empathy nor affirmation of that identity. An excerpt from a lesson titled "The Indian Society and Children" from the Class VIII Civics textbook illustrates this point further:

As you know, ours is a developing country. Most of the children are half-fed and half-clad. Their dwelling place stink with filth and odour. Poverty, malnutrition and lack of education is leading to increase in cases of child delinquency and juvenile crimes. What is child delinquency? It is a kind of misbehaviour on the part of the child which hampers his mental growth. He indulges in various kinds of anti-social activities. Instead of becoming an asset to his home or family, he becomes a burden to his family. A delinquent child is further prone to other vices like drug addiction, which further affects him physically and mentally. Child delinquency is not a feature of the Indian society alone. The Government of India is taking all possible measures to

check child delinquency in this country. Special acts are passed for care, protection, maintenance and training of delinquent children...

One of the questions at the end of the lesson is: What do you understand by the term "child delinquency"? Tone of this lesson recasts what in a liberal reading might have been an acknowledgement of the socio-economic context into one in which the child is in fact implicated for *his* poverty. This child is then represented as the subject of supervision and correction by the state.

Textbooks have invariably been produced within metropolitan settings of privilege, and power. The experiences of those who write textbooks are far removed from the lives, of poor (urban and rural) children, whose questions, interests do not figure within, the accepted hierarchy of knowledge. This is further aggravated by the fact that those who have contributed to the creation of knowledge regarding women have had little to do with the writing of textbooks. This might be, in the end, an extremely important reason why we have not despite a decade-and-a-half of rhetoric, moved beyond the stage of pious policy pronouncements. Gender-sensitive material at the primary and secondary levels require inputs from those who have struggled to bring women's voices, narratives, experiences and worldviews into the academic mainstream. Without this knowledgebase, those charged with rewriting texts will restrict themselves to superficial tinkering: either by increasing the number of times girls are visually or verbally represented in books or by facile role-reversals.

Viewing gender in isolation from other hierarchies and asymmetries within the social order results in such tokenistic revisions. Again, seeing gender as an 'add-on' in certain content areas and not others limits possibilities for engaging

children with gender issues in any meaningful way. As R. Ramanujam insightfully points out, "[A]ny discussion of gender at all is relegated to language lessons, and the percentage of time spent on this during 12 years of schooling is negligible."

A gender-just and empowering curriculum should have the potential to enable students to critically engage with and challenge received knowledge about fixed gender identities. Insights from women's studies and the women's movement both in this country and in other parts of the world over the past twenty years have enriched our understanding of how education can form a part of this project of possibility.

Experiences of literacy activists and those engaged in teaching women's studies at the university level show that it is possible to integrate gender into the curriculum, not as marginal or incidental but as critical to the content of different subject areas. The content itself can then be made to take on wider dimensions, involving various subject areas in the school curriculum. Feminist critiques of knowledge also have the potential to influence more just and inclusive pedagogical practices and facilitate creation of "child -friendly" classrooms that empower students as well as teachers. They open up possibilities for gender inclusion in an integrated approach within and across different core academic areas of the school curriculum.

An example of an integrated approach across disciplines: A Curricula module developed by Nirantar for rural girls and women.

<p>PROPERTIES OF WATER How does rainfall occur ?</p> <p>How do plants absorb nutrients from the soil ? How does water get polluted ? How does life exist in water ? Life in water</p>	<p>THREE STATES OF WATER</p> <ul style="list-style-type: none"> • Water cycle • Rainfall • Monsoon <p>SOLVENCY</p> <ul style="list-style-type: none"> • Plant nutrition • Water pollution <p>OXYGEN CONTENT</p>
<p>WATER AND THE ENVIRONMENT Where does water come from ? How are seas, oceans, rivers formed?</p> <p>What are our local water resources ?</p> <p>Why do wells dry up ? How do handpumps work ? Are big dams more beneficial than small dams ?</p> <p>How do people in desert areas procure water ? What causes droughts ?</p>	<p>NATURAL SOURCES OF WATER</p> <ul style="list-style-type: none"> • Rivers, lakes, seas • Underground water <p>WATER RESOURCE MAPPING</p> <ul style="list-style-type: none"> • Local/regional/national <p>RELATIONSHIP BETWEEN NATURAL AND MAN-MADE SOURCES OF WATER</p> <ul style="list-style-type: none"> • Understanding the water table • Water pollution • Handpumps • Systems of irrigation • Environmental impact of big dams <p>WATER IN DIFFERENT ECO-SYSTEMS</p> <ul style="list-style-type: none"> • Water sources in desert areas • Water sources in mountainous regions • Droughts and floods
<p>SOCIAL ASPECTS OF WATER Who controls the village well ?</p> <p>Who fetches water ? Do we have enough water ?</p> <p>Why is clean water essential ?</p>	<p>CASTE AND CLASS</p> <ul style="list-style-type: none"> • Purity and pollution • Control over water resources <p>GENDER DIVISION OF LABOUR AND WATER</p> <p>AVAILABILITY OF WATER</p> <ul style="list-style-type: none"> • Local and regional agitations for drinking and irrigation water • Government structure: Water Department • Alternative efforts at making water available. <p>HEALTH</p> <ul style="list-style-type: none"> • Body's need for water • Right to potable water • Water borne diseases

Assuming that the evolutionary approach to education involves building upon experiences and thought structures that are familiar, the curriculum will have to be designed such that it helps the child critically understand her surroundings before recognising and negotiating other contexts. The themes that become important in such a context will have to relate to work, body, sexuality, marriage, parenthood, family, caste, community, state, modernity, economy, violence, conflict, heterogeneity and hierarchy. These cross cut into language, social science and science. As against the surfeit of information that is sought to be passed on to the student, the emphasis should be on introducing these issues and developing critical thinking through them. These themes could be taken up in each of the subjects that are taught at school at every stage. Complexity in thinking can be introduced as the stages advance. Higher stage here would therefore indicate strengthening of critical tools rather than accumulation of information.

RECOMMENDATIONS

- 1) *Access to Education for AU Girls:* The government must be impressed upon to spend more on education. Nothing short of *free and quality education for all* and the provision of *accessible schools* for girls in every-area of the country-, will ensure that all girls gain equal access to education.
- 2) *Retention and Quality of Girls' Education:* Government schools are increasingly becoming centres of poor quality education for the marginalized sections of society. specially girls. which in turn is connected to the high dropout rates of girls. Hence the *infrastructure and quality of teaching in government schools must be brought up to the mark..*
- 3) *Nationwide consultations on schools of religious denomination:* Nationwide consultations must be set up regarding the status and proliferation of schools of religious denomination, of both the majority and minority community. as the education imparted in these schools bears critically on issues of communalism and gender equality. The unregulated status of religious schools. and the nature of education they impart. have special implications for gender equality as such schools have a definite agenda that both reinforces the subordination of girls and fixes their identity solely in terms of a religious identity.
- 4) *Establish Gender as a Critical Marker of Transformation and as an Organizing Principle:* Gender should not be a "mere add on"; it is a cross-cutting issue that requires both specific attention as well as

integration into all areas of reconceptualization. *Gender must not be introduced as yet another subject; that will only serve to marginalize gender issues and further increase the heavy curricular burden on learners; rather, it must inform every area of education in all its stages and aspects. Gender has to be recognized as a critical marker of transformation, and must become an important organizing principle of the national and state curricular framework as well as every aspect of the actual curricula.*

- 5) *Establish that Gender is Not a Women's Issue - it is a People's Issue: Train Boys to Confront Themselves and Patriarchy:* Patriarchy persists because there are men and women who support it. So far men have been part of the problem - education must train them to become part of the solution. Boys must be trained to confront themselves and try to understand how they benefit from patriarchy, how they derive privilege and power and how, by not changing the system, they perpetuate gender inequality. They must be made to understand that in the ultimate analysis gender inequality doesn't benefit anyone-it only leads to mistrust, insecurity and disharmony. Education should enable boys to question their own socialization into masculinity, and start the process of change in their personal relations, domestic life and sexuality.
- 6) *Critical and Pro-active approach to Equality and Empowerment of Girls:* Equality and Empowerment of girls have both been key objectives of educational policy for long, but have lacked critical edge in

implementation. Hence there should be' a critical shift and greater specificity in the understanding of these objectives, and all fields and stages of education must be informed by a more critical and pro-acta approach as follows:

An approach to Equality that:

- Aims at a substantive equal *outcome*, not formal equal or identical treatment.
- Recognizes the specific disadvantages of gendered hierarchies and subordination across class, caste, religion and the rural-urban divide, but does not accept them; instead it aims to *dismantle the disadvantages of gender*.
- Helps learners overcome these disadvantages, and *develop their capabilities to their fullest* to achieve meaningful equality

An approach to Empowerment of girls that:

- promotes self-recognition, a positive self-image and self-actualization.
- stimulates *critical thinking* and develops in learners, both boys and girls, the *ability to question relations of power* that are central to the hierarchies of gender
- deepens understanding of the gendered structures of power, including gender
- enables *access to resources*, specially to an expanding framework of information and knowledge

- develops the ability to *analyse the options* available, and to facilitate the possibility of *making informed choices*
- challenges relations of power and enables girls to *take control of their lives and assert their rights* as independent human

Further, education should aim to enable girls to move from individual empowerment to playing active roles as citizens in transforming the collective life of a democracy.

- 7) *Integrate Input of Women's Studies Research in Textbooks, Syllabi and Training:* The NCERT, as well as the SCERTs in each state, should develop formal linkages with centres and schools of women's studies in universities, as well as with individual scholars and activists who have experience of working on gender issues in different disciplines. Joint programmes, funded by the NCERT and SCERTs, should be set up with a view to deriving inputs from research done in women's studies, and to *jointly preparing material informed by a critical and pro-active approach to gender, for textbooks at the primary, middle and secondary levels.* Women's Studies academics and researchers should also be invited to *shape the formation of syllabi and content of different disciplines.*
- 8) *Integrate Input of Trained Experts on Adolescence and Sexuality:* The NCERT and SCERTs should draw upon the expertise of gender sensitive *psychologists* and counselors to prepare material, and design curricular practices and pedagogic strategies, that provide information and can

facilitate frank and healthy discussions on adolescence and sexuality for girls as well as boys. Since adolescence is a critical formative period and sexuality is central to a person's sense of identity, self-esteem . . . and confidence, it is important to make the young aware of the diversity which exists in expressions of sexuality and gender, and come to terms with the role of sexuality in their lives; to encourage them to experience freedom from shame; to enable them to make *informed choices* that equip them to negotiate danger from those who seek to violate them; and to help them to develop the confidence to express what they see as right or wrong

- 9) *In the Social Sciences* a) *give importance to the reproduction of the household, the labor-force, and human and cultural resources:* Highlight the *reproduction* of the *household* and of the labor-force and human and cultural resources. Only when there is a paradigmatic shift in the frameworks of the social sciences and they expand to include not merely accounts of production but also accounts of social reproduction-of the reproduction of the *household*, the labor-force and human and cultural resources, will women feature adequately in the social sciences in a way that does justice to their work. their lives and the totality of their experiences. b) *Incorporate gender dimensions of Diversity, Sexuality, Violence and Conflict:*

Issues of diversity. sexuality. violence and conflict in which gender is implicated should be incorporated in all areas of the school curriculum.

10) *Language should be viewed across the Curriculum and Awareness be built in of the ways in which it Neutralizes and Perpetuates Power Differences:* Curricula and syllabi planners, text-book writers along with teachers and students need to:

- understand the ways in which language naturalizes power differences
- make a language. of sexuality. physicality and bodies available to students, particularly girls - we have heard cases of young girl students falling ill because of their inability to articulate bodily needs, functions or dysfunctions
- understand that inadequacies of language and the issue of silence in women's speech and writing are not markers of biological or "natural" inability in girls and women but are signs of inadequacies and silencing in culture and education which socialise women to be passive and deferential
- recognize that the language of literature, conventional metaphors, and ways of writing do not reflect female lives, bodies or ways of being. The language of female subjectivity is absent in traditional male dominated literary discourse. Women's writing that provides access to such language and perspectives must be given a prominent place in textbooks
- recognize that because these norms and absences have been socially constructed they can also be unmade - hence the need for feminist deconstruction and reconstruction.

11. In *Science Education*, highlight *Gendered Dimensions of Science, Environment and Technology*, as well as *Scientific Dimensions of Personal and Domestic realities*: Science education should develop a focus on the gendered dimensions of science in education and in the life-worlds of learners. Aspects to include:

- Sex of male and female decided by the male sex chromosome and not by females.
- Cognizance of the fact that physical capacities are differentiated in men and women, and cannot be compared - e.g. men's ability to lift heavier loads, or run faster vs. greater stamina and longevity of life in women, or a higher threshold levels for the tolerance of pain. Recognise the differential abilities of both sexes, rather than categorize one as stronger than the other.
- Problems and exercises, as well as texts that reflect the reality of women's lives and experiences and also highlight contributions of women scientists.
- Laboratory work that highlights scientific dimensions of work in the domestic sector also. e.g. chemistry in the kitchen.
- An understanding of women's roles in preserving the environment and reasons for this, such as the impact of deforestation on women's lives and their role in the Chipko movement.
- Recognition of ways in which technology can affect women's lives.

Gendered aspect;; of contraceptive and reproductive technologies, female foeticide etc. need to be discussed.

12) In *Mathematics. a Focus on conscious De-mystifying and De-masculinising* is absolutely necessary:

- Particular attention needs to be paid to the language of mathematical problems which bear little relation to children's use of language in everyday life and in addition construct a gender stereotyped 'image of the social world, or one where women are simply absent.
- Systems to make scientific and mathematical language accessible to girls and first generation learners need to be set up.
- The contributions of women mathematicians, and processes underlying everyday mathematics done by women both within the home (like *kolam*) and outside (in the marketplace). need to be included.

13) Open *human minds to the Capacity for Rational Critique* and enable them to *Envision New Possibilities*: Knowledge in textbooks, and curricular and pedagogic strategies, should be geared not towards "fixing human knowledge" but to open human minds to the capacity for rational critique and enable them to envision new possibilities - only then can a transformation in gender relations be possible '

14) *Introduce Participatory and Dialogical Pedagogic mode*: Pedagogy should move from a transmission mode to affirming participatory and dialogical interactions between teacher and learner. This is necessary

both for recognizing the needs of girls and other marginalized students who are seen as passive recipients of knowledge, and for creating a learning environment in which their voices find place.

- 15) *Curricular Practices to be shaped. by the Life worlds of Learners in collaboration' with Parents and Teachers:* Curricular practices should be shaped by the life worlds of the girls and boys from socially and economically disadvantaged backgrounds, in order for learning to become meaningful to them. Mechanisms and systems need to be put into place to facilitate decentralized processes of curriculum development. Involvement of different stakeholders from education-teachers. parents, local experts. researchers and activists-would facilitate the production of materials more relevant to children's lives. This is especially important given the increased efforts of the government to educate first generation learners and retain them in schools.
- 16) *Incorporate Conflict as a Pedagogic Strategy in the classroom:* Given that violence pervades children's lives in the home, the school and the public world. pedagogy must address and organically incorporate conflict as a pedagogic strategy in classrooms. This is necessary for enabling children to develop critical perspectives on violence and to deal with conflict.
- 17) *Assessment System geared to Differential Aptitude:* A standardised singular assessment is not desirable in the context of the differential needs and aptitudes of children. A variety of assessment strategies and

multiple modes of assessment must be introduced that include the oral and the written, as well as objective, subjective, visual, narrative, abstract and concrete, artifactual and symbolic, etc. These differential assessments should be designed to take into account the special aptitudes of different groups.

18) *Assessment Affirming "a spirit of Critical Inquiry:* Assessment should affirm flexibility of mind, a questioning attitude, and skepticism towards some textbook writer's version of "eternal truth" rather than penalize learners for this.

19) *Teacher Training to be more Self-Reflective, Participatory, and Research oriented*

- Teachers' trainings, whether pre-service or in-service-need to have a vision of the teacher herself as a learner engaged in inquiry and reflection. Systematic study of gender theory should be combined with engagement with their own position in society vis-à-vis gender roles.
- Research skills need to be made part of the initial input given to teachers and research grants need to be provided to teachers to encourage them to channelise their work into research material emerging from within the school to create an active situation of learning and energizing the teacher.
- Substantive support mechanisms need to be developed, for teachers who are enthused to implement new ideas and pedagogies as part of

their training, with the objective of nurturing initiative emerging from within the school. rather perpetuate a top down approach.

- Mechanisms for enhancing, evaluating and monitoring the quality, regularity and impact of teacher training programmes, specially in the rural areas, must be put in place.

20) *Textbook Evaluation from the Perspective of Gender:* Content analysis of all textbooks from the gender perspective is extremely important. This analysis should include monitoring and regular evaluation of impact

21) *Support for Research to build Perspectives on Relationship between Gender and Education:* Despite attempts over the past 50 years to integrate gender into policy and curriculum, we do not have the knowledge base to build perspectives on the relationship between gender and education in the diverse and changing context of our schooling. This should form a research focus for studies in gender, curriculum and pedagogy. Organizations like NIEPA, NCERT should provide support for research in these areas.

22) *Create Banks of Gender Sensitive Material:* The NCERT and other educational research and training institutions must build up a bank of materials produced for children and young people that raise gendered dimensions of issues addressed in the classroom, represent gendered perspectives of diverse life-worlds, and are geared towards empowering girls. This is crucial for facilitating textbook writers and teachers in transforming gender relations.

Feminist Critiques of Disciplinary Knowledge

1. HISTORY

The field of history has conventionally been associated with power-of events and people that are believed to have impacted the world-and therefore it has excluded most categories of men and almost all women since most human beings have been subjected to power, and only a few have wielded it. Conventional history has therefore marginalized most people and its gender bias has therefore been almost intrinsic. However this limited framework has over the last century been expanded to include social, economic, political and cultural processes and institutions as well as accounts of what is called history .from below or people's history. Unfortunately these new developments have continued to exclude women subsuming them mechanically under men, even as the focus shifted to peasants, labourers, tribals, and dalits.

The 'add women and stir' approach has been particularly unsatisfactory in the case of women because by a mere mechanical enumeration of such and such women who 'also' all. occasion wielded power (like Razia Begum, Nurjehan or Rani Lakshuibai), or took part in movements, or worked on the lands, or helped to make pots, etc. only serves to consolidate the position that women did/do very little. This is partly because the sources have either reflected the biases of history in terms of emphasizing the role of a few men and even fewer women or excluded the

roles of women in social, economic and political life altogether.

Feminist historians have therefore argued that given the sexual division of labour, and the concurrent creation of a public/private dichotomy and the hierarchy of values attached to them, women will remain marginal in any account of history. Hence, while it is important to outline women's participation in production of food and goods which has been invisibilised as they are rarely the owners of resources and their work is subsumed under that of men. this is clearly not enough. Therefore, unless there is a paradigmatic shift in the framework of history and it expands to become not merely the history of production but also the history of social reproduction-of the reproduction of the household and of the labour-force and human and cultural resources more generally women will never feature adequately in history in a way that does justice to their work, their lives and the totality of their experiences.

2. GEOGRAPHY

Geography in India continues to remain androcentric i.e., male-centric and part of this myopic vision stems from the intellectual history of geography's evolution as a discipline not only in India, but also in the Anglo-Saxon world that had dominated the Indian geography for long. But while the Anglo-Saxon world has moved ahead in terms of developing a distinct branch of geography variously called Geography of Gender and/or Feminist Geography. Indian geography has lagged far behind in this respect. Part of the problem is the unresolved debate about what

geography is and what is not, with an emphasis on the latter rather than the former, which makes bringing women as a subject matter in geography more problematic, particularly at the school and undergraduate level. This is particularly distressing in a situation where theory and praxis have moved from multidisciplinary and interdisciplinary approaches to a trans-disciplinary approach elsewhere in geography teaching and research.

The tendency in Indian geography has been to produce research of a descriptive nature facilitated by the historical tradition of empirical data gathering made possible largely because of extensive reports, gazetteers and a record keeping system of colonial origin. Moreover, physical, regional and social-cultural discourses moved independently of each other with the result that grounded realities were rarely seen as providing a backdrop for human activities to unfold. Even the seminal narrative of Spate's *Geography of India* and many more (regional) works that followed were not free from such limitations in the sense of having masterly descriptions without linking the physical and the regional with wider social and cultural processes in a mutually interactive framework. The quantitative revolution that followed in the positivistic tradition of the West was once again delinked from the understanding of processes embedded in space. Data gathered were mostly on readily quantifiable attributes perhaps because of the intellectual preconceptions of geography as an ideographic rather than a nomothetic discipline.

Even otherwise, it was the men who spoke for humanity at large despite

the fact that historically women were at the forefront of transition from nomadic to settled lives. This was essentially because women were seen as confined to the private domain of hearth and home whereas the outside was associated with men. Scholars have pointed out the inadequacies of such binary and the fluidity of private and public spaces and that given the division of labour between men and women, women can experience their environment differently as compared to men. The current discussion on environment and the differential consequences of depleting natural resources on women vis-à-vis men because most of the forest-based informal activities are carried out by women for livelihoods of their families is a good example. Women's exposure to and interaction" with natural and built environment may be limited also because of their limited physical and social mobility resulting in quite a different experiential world.

Many recent developmental reports in India have brought out how spatial location in which women live makes a difference even to such basic well-being as longevity, i. e. a woman in Kerala can expect to live longer by 18 years than a woman in Madhya Pradesh despite little difference in per capita incomes between the two states (Kalyani Menon-Sen and Shiva Kumar 2001; Rastogi 2003, also see Agarwal 1994). Until recently, survival chances of girls as compared to boys (sex ratios) had a distinct regional pattern of its own (Atkins et. al. 1997; Kumar et. al 1997) and yet for quite sometime geographers have been slow in recognizing that the spatial implication of place may differ for women and men and there can be

geography of women (Raju et. al. 1999).

For one, those who produced geographical knowledge in India were men. The latest account of Indian Geography over the decades showed this characteristic in that the National Association of Geographers, which is a body for geographers including school teachers and students did not have a woman president (Kapur 2002). Despite increasing number of women students at college and university levels, the faculty composition does not reflect the changing profiles of students (Raju and Datta 2004). Given the general environment within which the discipline of geography is located in India, it is not surprising to see what I would like to call. 'missed opportunities' in reorienting some of the androgynous leanings of the discipline. The Model Curriculum for Indian universities (mentioned above), while proposing specializations groups and thrust areas the latter 'needling' urgent attention in the coming years' talks about 'Climate and *Man*' and 'study of earth as the home of *man*' (page 27, emphasis added). However, one of the redeeming features is that in the same curriculum 'Gender Geography' is included as one of the proposed optional papers for the first time (the earlier curriculum reviews were undertaken in 1968 and 1989). Although the suggested content could be broadened and leaves much to be desired, it is the first official endorsement of arrival of gender geography on the horizon and should be welcomed as such.

Although a critical perspective on Geography of Women has yet to come, a relatively recent body of research by individuals and a small

number of university departments (as well as through seminars and workshops), sporadic or small it might be in terms of overall outreach and impact, does demonstrate an intellectual growth in terms of moving from descriptive pattern identification (based on statistically segregated data by men and women) to critical analyses of processes pushing women to margins. Given this situation and also the mandatory 'gender inclusive understanding of development processes, it is imperative that the younger generation is systematically exposed to issues of gendered deprivation and marginalization that have distinct spatial and regional character in India.

3. ECONOMICS

Over the last two decades, feminist critiques of knowledge have no doubt made considerable inroads into traditional domains of the humanities and the social sciences. However among the social sciences, mainstream economics, namely neoclassical economics I , has been the most resistant to engaging with gender as a socio-cultural construct with an impact on construction of knowledge. Although this has not restricted the successful emergence of feminist economics as an area of scholarship; unfortunately its proponents have not been able to mainstream their critiques as effectively.

Economics is particularly an important discipline to address because it remains the hegemonic discipline. Over the last half a century, it has increasingly ventured into studying areas that are the subject matter of other disciplines: economic theory of politics, economics of education, and

even that of marriage and divorce among others. Not only has it strayed into other disciplines but holds considerable sway in informing the policy process. Hence it is all the more important to interrogate the basic assumptions of the discipline and **make students aware of not only the gender of economics but also understand the economics of gender** (Folbre, 1994; Jacobsen, 1994).

Economics is broadly defined as the science of decision-making under constraints. The neo-classical world-view it rests on three pillars (Krishnaraj, 2001). These include:

- **Positivism:** upholds the scientific method, whereby facts speak for themselves unmediated by social reality; and the economist is the archetypical scientist "objectively" recording reality, which is in actuality the masculine subject.
- **Methodological Individualism:** relies on the atomized individual as the unit of social action and behavior and these individuals with certain pre-given preferences in aggregation form a society.
- **Rational-maximising behavior:** It regards humans as rational and assumes that rationality underlies all human behaviors. The central theoretical paradigm is that of rational self-interest: people act so as to maximize their own outcomes, i.e. act in self-interested ways.

Having established the masculinist biases implicit in the discipline, it is also important to explore how gender differences lead to different

economic outcomes for the sexes. The outcomes are measured in terms of earnings, income, poverty rates, hours of work, and other standards used by economists to determine economic well being. As opposed to the "atomised" individual, it is important to acknowledge that economic agents can be male or female, and they interact in families as well as in firms and in markets (Jacobsen 1999). Three types of economic inquiries need to be pursued in order to explore the economics of gender:

- theoretical models based on two sexes
- empirical work that addresses similarities and differences between the sexes
- analysis of economic policies that affect the sexes differently

Within the context of India, it is also important to introduce within the school curriculum the gender and development discourse to better understand and explore how gender is constitutive of the larger economic development trajectory and alternative ways of understanding development (Kabeer 1999, Sen 1999). Key areas on which school texts are usually silent and are critical in exploring gender issues include:

Women and work: Traditional economic analysis has tended to make a large proportion of women's work invisible because economic activity was directly or indirectly associated with the market. Income earning activities were conceptualized as work; so was agricultural family labour that produced for market oriented goods, even when labor was unremunerated.

A wide range of unpaid activities - producing goods and services for the family consumption, were not economically seen as work along with domestic production and voluntary community work. A high proportion of women concentrate in these activities, the result was economic invisibility and statistical underestimation of women's work. Further women's activities remain undervalued as a result of viewing the market as the central criterion for defining 'economic'.

Even when women are "economically active", they are still working in a segmented labour market, primarily in areas defined as 'feminine'. These also tend to be the more low-paying jobs. There have been considerable efforts to make women's work more visible at the theoretical and empirical level. The 1991 census expanded the category of work to include subsistence activities - removed the statistical purdah that had rendered women's work invisible. However, the debate continues with "caring work;" and the care economy still remaining outside the purview of work. If children are supposed to grow up as sensitive young men and women, it is important that they are aware of issues and debates around the seeming natural sexual division of labour.

Looking at intra-household dynamics: Households are treated as the basic socioeconomic unit of analysis and viewed as being internally undifferentiated and homogenous structures, especially by economists. The neo-classical view of the household as the proverbial "black box" treats them as undifferentiated units which are considered to be safe locations of

mutually benefiting reciprocal interests with an "altruist" patriarch, a construct of New Household Economics, at the helm of household affairs (Becker 1981). Individuals and households are discussed interchangeably as if they are one and the same unit. On one hand, the household is treated as an individual by another name as though it has interests and a logic of its own; and, on the other hand, individual behavior is interpreted as being motivated by household interests and reflects the household needs (Folbre 1986, Wolf 1990, Kabeer 1994).

This dominant view, feminist scholars argue, is limited in its explanatory power because it fails to recognize the diversity of household arrangements, internal stratification of households along the lines of gender and age, and the location and function of households in relation to the larger economy and polity. The consensus view completely ignores the possibility of differential and competing interests in the household and the existence of iniquitous systems of intra-household resource allocations on the basis of gender, age and (often) kinship ties. The emphasis on the moral economy of the household spins a fairy tale where value; of self-interest, competition, and struggle prevailing in the public sphere are left at the door and altruism, voluntarism and reciprocity take their place in the domestic realm (Wolf 1990).

4. SOCIOLOGY

Textbooks of sociology in India are usually divided into two parts dealing with theoretical and substantive themes respectively. Essential to the

theoretical section are references to the " *Founding Fathers*" such as Durkheim, Marx and Weber. This cannot be resolved simply by adding the contributions of women sociologists, though this is important in itself. What is required is a gendered analysis of the thinkers. Indeed resources for furthering a gendered understanding can also be drawn from them. Further the gendered assumptions underlying theoretical approaches such as Talcott Parson's structural functionalism, though almost invariably dealt with in sociology textbooks, is left unquestioned.

Within substantive sociology the focus is on structures such as caste, class, tribe, family, culture and *processes* such as modernization, westernization, Sanskritization, urbanization, industrialization and lately globalization. Neither the structures nor processes are seen as gendered entities and the fact that these structures and processes mean different things to men and women are often overlooked. For example in one NCERT textbook, a chapter on population and demography is included but the adverse female sex ratio is not mentioned. Sex ratio is mentioned in a sub-section on women in a chapter on deprived groups. This mode of treating gender stems not so much from not knowing that gender is important; rather from a flawed understanding that a *gender perspective implies adding women* as a *topic or chapter* or at the most *by making women visible*, or by *enumerating women's issues as social problems*.

Visibility is very important in social sciences where women have by and large been missing. But in Indian sociology the fact that women are not

treated too well in contemporary Indian society (if remarked at all) would be seen as *an aberration from the normative status and role of women* in the ideal Indian society. This has to be understood in the context of the prevailing influence of the "book view" rather than the "field view" in Indian sociology.

The distinction between the "*book view*", often coinciding with the Indological perspective and the "*field view*" has been much laboured upon in the discipline. Yet, all textbooks, whether of the NCERT or the many books expressly written for competitive examinations, reflect no understanding of this distinction. Thus an image of the typical "Indian joint family" crumbling under the forces of social change but epitomizing the values of Indian womanhood override all the empirical studies that sociologists themselves have conducted about the regional, caste, tribe variations in family patterns. The high status of Hindu women is eulogized with reference to *women as key symbols of purity and honour of family*, lineage and caste. It is seen as entirely unproblematic that a woman is recognized as a person when she is incorporated into her husband . . . only then does she become a social entity and in that state she is auspicious, a *sumangali* (auspicious woman), a *saubhagyavati* (fortunate woman). Both terms are used only for a woman whose husband is alive. A gendered understanding of the ideology of honour would for instance' go a long way to make explicit in textbooks the relationships between gender, caste, and labour. The many instances of honour killings or even dowry deaths could then be explained sociologically rather than as seen as 'deviance' or 'social problems'.

The engagement between "questions of visibility" versus questions of "interrogating the cognitive structures" of the discipline is rarely explored. The subject matter of the discipline has conventionally been understood as about marriage, family and kinship, about customs and rituals where perforce it is not easy to ignore the presence of women. Accordingly the problem never was that women were entirely absent. Indeed sociology is popularly considered a soft option and therefore more suited for women students. I therefore focus on the family in an attempt to problematize the notion of visibility.

In the study of family and kinship the relevant structures and processes of family and kinship has been seen from *the ego's (the man's) point of view*. Thus practices such as patriliney, patrilocality, *kanyadan* are presented in an apparently gender blind fashion.

Experiential aspects of family life (with which students are familiar) are completely neglected. For instance the inclusion of wedding songs sung in patrilineal societies is a good pedagogical device to illustrate the gendered nature of patriliney and patrilocality; as would be inclusion of common gendered sayings from matrilineal societies.

Since very often the North Indian, upper caste, patriarchal joint family norm is presented as "the *Indian norm*" an inclusive treatment of other kinds of family and kinship structures in different regions and across caste class hierarchies is required. I use the word "inclusive treatment" for very often treatment of 'other customs' is done in a fashion that renders them as the odd.

exotic, less developed remnants to the dominant, homogeneous norm.

It is evident that women are visible in chapters on family and kinship but the fundamental point that the *private* and *the public are inter related* is usually completely missing from standard sociology textbooks. A common way of making women visible or of questioning stereotypical gender roles is to bring in stories of successful women or of showing boys doing atypical tasks like housework. It is more difficult to challenge *the cognitive structure* of sociology itself, sociology of family and kinship is a mandatory chapter in any sociology textbook. Central to the nineteenth century social movement had been a concern with ameliorating the condition of widows. No modern history book fails to mention this. Yet widows are invisible in chapters on religion, on caste, on family, on religion, on culture. In this case even making them visible would be cognitively unsettling.

Apart from "unsettling" the question of visibility, it is important to interrogate why women are treated under "deprived groups" or "*social problems*". This reflects the broader problem of *understanding gender as an additional topic to be covered*: Issues such as child marriage, widowhood, sati, rape, dowry and Wife beating are seen as *aberrations* and not central to the structure and processes that sociology studies. A gendered sociology has to locate these as intrinsic to societal arrangements. For a gendered sociology it is imperative to *make linkages* between the micro and macro, the public and private. Gender has to be seen as an organizing principle of society, and not a topic, whether caste or industrialization, religion or globalization, tribes or

media can be dealt without a gender perspective. Finally it is important that an attempt towards a gendered sociology does not lead to *gender essentialism*. If the role of social sciences is to develop a *critical awareness* engendering sociology would be a step in the right direction.

5. POLITICAL SCIENCE

The mainstream discipline of political science has remained largely focused on politics in the narrow sense - party politics and party systems, elections and electoral alliances between different groups in Indian society, transformation of institutions. Social movements are studied to some extent, particularly Dalit and women's movements, but from the point of view of institutions and party politics - e.g. the politics of the Bahujan Samaj Party, the representation of women through the 72nd and 73rd amendments, or through studies on reservations in general.

Within this framework, gender and feminist theory are invisible. Existing work on gender and politics is done by feminist scholars from other disciplines - sociology, economics, and history. Even in the sub-field of Political Theory, where one could expect an engagement with the existing rich field of feminist theorising that challenges mainstream political theorists, entire courses on Contemporary Political Theory or Western and Indian Political Thought can be taught without any feminist understanding whatever. For example, Marxist thought without any reference to socialist feminism, Rawls without any reference to Susan Moller Okin's critique and so on, except where individual teachers make

their own intervention in the syllabus.

There have been some optional courses introduced on "Women and Politics" which have largely remained ghettos. More disturbingly, such courses can be taught with no reference to feminist scholarship at all, in a "status of women in India" mode, along the lines of government policies on "gender and empowerment." The real challenge is to ensure a feminist perspective in mainstream courses, and to shape the form of teaching through specific sets of readings, so that whoever teaches the course, it cannot be done without reference to readings developed by interested teachers in consultation with scholars in the field.

Indeed, this last point is one that needs to be made for political science teaching since it has tended to be text-book centred. We need to develop a set of readings (chapters/sections from books, key articles) that delineate debates around the topics in the syllabus, and make these available to teachers. Further, these reading sets need to be translated into whatever the local language.

6. SCIENCE AND TECHNOLOGY

In recent years many countries in the world have adopted policies for greater gender equality in education. Measures have been taken to increase access to education, and to have a common curriculum in schools. However, worldwide, female enrolment in tertiary level science and technology (S&T) is less than male enrolment and also less than in *other* subjects (World Education Report, 1995). The school experience plays an

important role in influencing the decision of students to continue into higher education and also their choices of study.

Women have historically had a limited access to S&T and are almost excluded from intellectual, scientific and technological communities. They have always been associated with nurturance, child rearing and house-keeping. Areas, in which women have excelled, such as, nutrition and midwifery, were never considered S&T. Further, the contribution of women to S&T is "hidden from history" as documentation is rare (Wajcman, 1995). Historically, images of men and women and their gender roles have changed and have accordingly been justified on different grounds. These justifications have ranged from the irrational to the pseudo-scientific. Paradoxically, modern science with its professed objectivity, far from demolishing biased perceptions about women, is actually 'strengthening' them. The organized knowledge of the ancient ages (or sciences), often viewed women as unique creatures, distinct from men. These sciences rationalized that women were incomplete men and thus inferior. The 'science' of craniology claimed that women were intellectually inferior because of their lighter brains. The fact that corrections for body size were ignored indicates that the processes of science are not free from bias (Gould, 1981).

Nature, the focus of the scientific study has been figuratively considered to be female and was symbolically depicted as female. Most languages use the feminine gender for abstract nouns like science and knowledge. The

obverse of the Nobel medals for chemistry and physics depict both nature and science as women. However, scientists were depicted as male and with time the popular images of science became masculine (Scheibinger, 1989). The emergence of social structures of the scientific enterprise (e.g. the formation of the Royal Society) reflected as well as fed these images (Haggerty, 1995).

Language used in the scientific circles also reinforced the masculine image of science. These ideas gradually took strong roots in the social milieu. Genderized language continues even today in science, perhaps in a less offensive manner than in the past. The objective sciences (mathematics, physics) are dubbed as *hard* sciences with the implied connotation of being masculine, while the subjective branches of knowledge (sociology, psychology) are dubbed the *soft* sciences, implying that they are more relevant to women. The stereotypes they generate are self-fulfilling. Far fewer women opt for mathematics and physics than for other subjects (Jones and Wheatley 1988).

The under-representation of women in S&T is often 'explained' by suggesting that there are biological differences in cognitive ability between men and women. Recent remarks made by Lawrence H Summers, president of Harvard University, suggesting that fewer women succeed in science and mathematics due to innate gender differences show that similar ideas exist in the highest echelons of academia (TOI, 22/1/2005).

The issue of sex differences in cognitive abilities keeps raising its head

regularly and is often played up prominently by the media (TOI. 7/2/2005). Research in this area has been by and large inconclusive. The differences, if any, in ability, turn up only at ages when it is difficult to separate the effects of genetic factors from socialization. There may or may not be biological explanations for sex differences in learning but it is obvious that social factors play an important role. From the earliest possible stage, girls and boys are treated differently by those close to them, differing expectations are held from them and later, the mass-media constantly bombards them with messages of what it is to be male or female in the society.

The key forms of identified bias in textbooks are (i) exclusion or invisibility of girls and women from textbooks, (ii) sex- role stereotyping, (iii) subordination of girls or women to boys and men in text and pictures, and (iv) lack of female figures in history (AAUW, 1992). These biases in the curricular material relate often not only to women but also to all minority groups (Sadker et. al., 1989). Textbook analysis continues to show the existence of these biases in Indian textbooks.

The image of S&T as male-only domains remains the dominant perception in most students' minds. Studies have shown that young children given information of generic language such as "mankind" and "he" draw pictures of men and boys when asked to visually present the information or story they had heard (Martyna 1978, ill Rosser 1993). How do students view science and scientists? In a study conducted at the Homi Bhabha Centre for Science Education (Chunawala and Ladage, 1990), girls and

boys drew a male scientist, who was young and worked alone, in a chemistry laboratory. They used masculine pronouns (he, his) when referring to scientists in the singular.

Not only the scientific focus and application but also the very conceptual organization of scientific knowledge, is influenced by the social and cultural milieu of the time. Feminist theory builds on this insight and examines in detail how gender ideology permeates the social construction of knowledge (Keller, 1985). With respect to technology the perception that what women do is non-technological persists, despite their involvement in survival technologies since the dawn of history. One cause for this perception lies in the way we define technology. Even the term 'work' is often reserved for those activities that result in monetary rewards or payments. Women's work is perceived as 'domestic', and outside the purview of technology.

Various socio-cultural factors keep women from entering fields that are overtly called technology. One such factor has been the deliberate exclusion of women from certain areas of work. Craft unions have played an active role in resisting the entry of women into trades, thereby relegating women to unskilled jobs and identifying skill work with men. The gender stereotyping of jobs is remarkably ubiquitous and even very young children strongly project that there are different occupations for the different sexes. One result of such all-pervading stereotypes is that women may choose to avoid areas that are hostile to them directly and which indirectly the society is hostile to

as career choices for women. This is confirmed by the low percentage of women entering fields, labelled S&T. Women account for only 9% of the scientific personnel in India (Expert group meeting on training of women graduates in the development process, Thailand, 1999).

The gendering of technology occurs since technology is the product of social relations and forces. Of all the possible technologies, only some may be selected, their development paths may vary, and their effects on different social groups may be different. These choices are shaped by social arrangements and are often a reflection of the power structures in society.

7. MATHEMATICS

Everyone does mathematics, and yet, for many students within formal education, it remains a distant and inaccessible area of knowledge. School mathematics is given a prime place in the hierarchy of school knowledge, but it tends to get constructed as a closed system made up of rules and methods to be memorized, rigorous practice of skills and application of precise methods. This construction masks the relationship of mathematics to the organization of power and privilege in societies.

"The assumption of mathematics as a discipline exemplifying perfect rational and logical argumentation gives it an exalted status in the school curriculum of the modern nation state, which places the rational, detached, autonomous epistemic subject at its centre. This construction is premised on an understanding that mathematics constitutes the highest point of human reason, that 'logico-mathematical structures *are* the structures of rational

thought' (Walkerdine, 1988, p.6). As Walkerdine (1989) elaborates,

Ideas about reason and reasoning cannot be understood outside considerations of gender. Since the Enlightenment, if not before, the Cartesian concept of reason has been deeply embroiled in attempts to control nature. Rationality was taken as a kind of a rebirth of the thinking self, without the intervention of the woman. The rational self was a profoundly masculine one from which woman was excluded, her powers not only inferior but also subservient. (p.27)

The historical evolution of mathematics as a discipline has thus come to define it as a masculine domain. Women and others without power in society are excluded by this definition, as lacking in the rationality required to access mathematical knowledge. In the case of women, this view acquired legitimacy through notions of women's 'innate' inferiority which originated in the 19th century and continues to circulate in contemporary times.

Willie mathematics appears to be value free and to report universal truths, in reality, are based on masculine values and perceptions. The construction of this 'masculinist domain' is aided by the complete lack of references in textbooks to women mathematicians, the absence of social concerns in the designing of curricula which would enable children questioning received gender ideologies and the absence of reference to women's lives in problems. A study of mathematics textbooks found that in the problem sums, not a single reference was made to women's clothing, although several problems referred to the buying of cloth, etc. (AWAG,

1988).

Classroom research also indicates a fairly systematic devaluation of girls as incapable of 'mastering' mathematics, even when they perform reasonably well at verbal as well as cognitive tasks in mathematics. It has been seen that teachers tend to address boys more than girls, which feeds into the construction of the normative mathematics learner as male. Also, when instructional decisions are in teachers' hands, their gendered constructions colour the mathematical learning strategies of girls and boys, with the latter using more invented strategies for problem-solving, which reflects greater conceptual understanding. (Fennema, 2000). Studies have shown that teachers tend to attribute boys' mathematical 'success' more to ability, and girls' success more to effort (Weisbeck, 1992). Classroom discourses also give some indication of how the 'masculinising' of mathematics occurs, and the profound influence of gender" ideologies in patterning notions of academic competence in school (Manjrekar, 2001). With performance in mathematics signifying school 'success', girls are clearly at the losing" end.

It is important to acknowledge that mathematical competence is situated and shaped by the social situations and the activities in which learning occurs. However, school mathematics has little relation to the social worlds of children where they are engaged in mathematical activities as a part of daily life. Open-ended problems, involving multiple approaches and not solely based on arriving at a final, unitary, correct answer are absent in the

way mathematics is approached in our schools. An overriding assumption of school mathematics is that an external source of validation (the teacher, textbooks, guidebooks) is always needed for mathematical claims. This approach acts to disadvantage all learners, but often acts to disadvantage girls in particular.

Girls and Mathematics: Kaushal's Story

This is the story of Kaushal, who loves numbers. So good is she at counting that her old grandmother, with whom she lives, always asks her to do the daily accounts. Kaushal is 10. Her parents and her younger brother live in a nearby city, where her father is a mill-worker. Her grandmother works in the rich people's 'bungalas' during the day, and helps with her studies every evening. Kaushal is proud of her grandmother, for she can read and write, and only a few women in her *basti* can do that: those who went to school for a few years before getting married and moving away from their parents' homes have forgotten how to Kaushal wonders about that: how can things that sit in your brain disappear?

Mathematics' is Kaushal's favourite subject. She likes it even better than craft, which is easy and which the teacher always helps the girls out with. She loves to come to the blackboard and solve sums in front of the whole class. The boys who sit in front - the teacher calls them the worst troublemakers - don't bother her too much, and the girls who do well in exams are not as good as her in doing sums. During other periods, Kaushal sits in her place at the back of the class and draws. She hates the noise in

the classroom, and thinks that the teacher should throw all the boys out. Most of them are bad at doing sums anyway.

The teacher always says that the girls are zero in mathematics, that they are only interested in talking and playing. Kaushal hates this - after all, she's always getting the sums correct, right there in front of everybody! But what she hates even more is that the girls also say this, they are so scared of themselves.

Her parents tell her that doing so many sums will make her brain weak for housework: will you teach your mother-in-law mathematics? they laugh. Some of her friends are already engaged to boys from their villages, and are going to leave school next year. Kaushal knows that her grandmother won't let that happen to her, at least not till she finishes school. After that, who knows? There are some jobs where they need girls who love numbers.

FROM: MANJREKAR, 2001

Is it possible to think of a gender-inclusive and gender-sensitive mathematics curriculum at the school level which goes beyond textbooks? Do we know enough about how girls learn mathematics, how they approach problems, what kinds of problems they find appealing and challenging? Is it possible to think of a 'less masculine' mathematics? Feminist mathematics educators are struggling to define what a feminist approach to the study of mathematics might be. Some are examining the ways that females and males think and how they learn mathematics. Some

are concerned with using women's voices and their histories to identify important questions. Others are examining the language of mathematics to determine whether it is gendered.

After the 1986 education policy, the NCERT Department of Women's Studies published teachers' handbooks to address gender equality through mathematics, with detailed biographies of women mathematicians. Such efforts need to be revived within an approach to gender inclusion that moves beyond quantitative representation, and brings in insights from girls' social experiences" and particularly their experiences of dealing with mathematical problems in everyday life. Folk mathematics provides a rich resource to draw on for such an approach, and needs to be incorporated in the curriculum.

8. LANGUAGE

Language is an integral component of culture. It encodes a culture's values and preoccupations and transmits and disseminates them. It cuts across all disciplines, is basic to the construction of knowledge and has pervasive and wide-ranging implications for gender relations. Hence it is very important to examine how gender is encoded in language. Like other representations, linguistic representations too are a marker of women's position in society. We need to question out commonsensical assumption that the sexes share "a common language". Existing language is patriarchal and inscribed with the inequitable power relations of society. Since language is androcentric there is a need to change it: to make it responsive to not only for women's use but for society as a whole. While gender differences are crucial in understanding

how language functions differently, it is also important to remember that men and women are not homogenous groups-they are in turn defined by class, culture, ethnicity differences. Therefore it is essential that we recognize differences while rejecting stereotypes of sex difference in language use. Feminist critique of language can be mapped along several axes:

1. Feminist critiques argue that the fundamental semantic and grammatical structure of language construct male as positive and female as negative, attributing value to "male" qualities and denying them to the "feminine". Language functions as a carrier of ideas and assumptions which are naturalized and also reinforced through everyday exchanges. They become so conventional that we miss their significance. Sexism pervades language-it penetrates its morphology (eg. word endings), affects stylistic conventions and functions through something as common and everyday as the generic use of "man" to designate all humanity. Similarly, in naming conventions women were traditionally marked either by their father's or their husband's surname-passing from one to the other. The titles Miss and Mrs. indicate women's marital status, whereas there is no such indicator in men's titles. Therefore the need to sensitize students to the way that language functions and how it entrenches ideas and naturalizes power differences is pervasive. This is not just an issue of certain words being offensive. However, it is also important to highlight that because these norms have been historically constructed they can also be unmade - hence the need for feminist

deconstruction and reconstruction.

2. Feminist critiques of language are also concerned with whether the world is "named" or represented from a masculinist point of view or whether they reproduce a stereotyped view of the sexes. "Names" are a culture's way of fixing what will actually count as reality. It is argued that language does not merely project something that is out there and already existing but also shapes and constitutes it as well as our attitudes towards it. Thus using language differently can actually change conditions and situations. Students should therefore be taught that language matters, not only on the superficial level of "political correctness" but on the deeper level of changing attitudes and thereby situations that obtain in the world. Using the word "black" instead of "negro" or "differently abled" instead of "disabled" or "sex worker" instead of "prostitute" is not just about greater social acceptability but about being aware of histories of oppression, segregation and moral condemnation and the will to change it.

A critical exploration of the sexist terminology in the area of human sexuality clearly illustrates how women's passivity is linguistically reinforced through the lexicon and its implications for the identity formation of boys and girls. The language used to describe intercourse whether colloquial or clinical constructs the male as active ("penetration" as opposed to "enclosure" etc.). Feminist scientists have shown how the language of biology reinforces these stereotypes in the sphere of cell reproduction too.

Also words which are "neutral" take on sexual also negative connotations when applied to women. Schulz points out how words like "professional" and "tramp" when applied to women mean. "loose woman". Also how certain words like "slag", "slut" etc. are only feminine in application and use. Parallel instances to characterize male promiscuity do not exist or at least are rare. These words are consistently used to sexually harass girls as well as to regulate their sexuality.

Not only are the girls subject to sexual harassment, but are also denied access to the language of sexuality. Women are thought unfeminine or coarse if they write or speak sex. The need to make a language of sexuality, physicality and bodies available to our students, particularly girls is extremely important. We have heard cases of young girl students falling ill because of their inability to articulate bodily needs, functions or dysfunctions particularly in mixed classes 'or in mixed pedagogical situations. The language of sexuality in text-books is caught between the awkward evasions of Moral Science texts and the clinical abstractions of biology books. None of these address the ground realities of students' sexual lives and particularly the socio-cultural aspects of sexuality as it obtains within entrenched gender systems. In a post-AIDS world, curriculum makers are waking up to the need for Sex education. But much of this remains a strategy for crisis management which has no overall vision and does not address the specificities of students' lives and cultural and gender issues. Even as the media and the market bombards students with a new language of apparently

"free" choices, consumerism, "emancipated" and "modern" sexual norms, students struggle to forge links between what they are taught through text books and in classrooms and what they experience in their daily lives. Teachers, curriculum makers and text-book writers have to contend with this new language of the media and try and develop a criticality in students regarding these issues so that they do not get overwhelmed by the lure of the market and its promises of "freedom".

3. The language of literature, conventional metaphors, ways of writing also do not reflect female lives, bodies or ways of being. The language of female subjectivity is absent in traditional male dominated literary discourse. This makes the subject of teaching literature texts (which are usually male authored texts, *very few* women authors are represented in middle or high school "rapid readers" or literary selections) in classrooms particularly challenging.

In producing text books for literature teaching as well as in class-room situations we need to question the liberal humanist invocation of "universal values" or "human" values which refuses to take material distinctions of class, gender, location or identity into account. This is an attitude which pervades much of our literature teaching in classrooms. Teachers struggle to explain why a poem about a bunch of daffodils that delighted Wordsworth is a "universal", "human" document that children from say West Midnapore who barely understand the language must relate to. However this is not to suggest that no literature other than our own or describing experiences not

our own should be taught, or that "relevance" should be decided along very narrow utilitarian lines. But perhaps the same sense of literary merit could be communicated to the student without insisting on the "universality" of the experience (which may really be quite specific and alien as far as the student is concerned) and without insisting on a complete identification on the part of the student which only confuses and distances her. This is equally true of teaching male authored discourses where the specificities of the authorial position should be made transparent so that as readers the students do not feel compelled to identify with situations patently not their own. However this is not to say that they should not be encouraged to be sympathetic to these different situations. That would defeat the very purpose of teaching literature which should ideally be a means of sensitizing students to the specificities of human experiences and feelings.

4. We must address the issue of silence in women's speech and writing. Women are silent because adequate words do not exist, because society censors certain forms of women's articulation, because silence can sometimes also be subversive. Yet paradoxically women are stereotypically characterised as garrulous and gossipy. But their speech is disparaged. Also women are associated primarily with certain kinds of speech like private confessional outpourings (letter, diaries etc.), storytelling etc. Most of these genres too are not taken seriously. They are "private" forms of language, confined to the home, family or the community. Women are rarely associated with public communication

like religious rituals (there are taboos on women being ordained as priests, articulating prayers or preaching publicly), political rhetoric, legal discourse, science, poetry. Female voices and concerns are absent from high culture. But they are equally excluded from sub-cultures. It is considered inappropriate for women particularly from the upper and middle classes to indulge in swearing, joking, or using slang. There is a need not only to make women's silences heard, but also to break them by questioning taboos and dogma against women's speech within the existing structure. Text-books should not replicate this system of silencing and exclusion and teachers should sensitise students to be aware of them in language and culture.

Traditional linguists have suggested that women's language is timorous, conservative, overly polite, trivial in subject matter given to repetitive, simple and illogical and incomplete syntax. According to Lakoff female inadequacies of language are not markers of biological or "natural" inability in women but are signs of inadequacies in culture which socialises women as timid, meek and polite and deferential (which is part of the training to be subordinate). Other linguists have shown that women use language in a different way and have seen the difference - not as "inadequacy" but as a positive quality (Irigaray etc). These works have challenged the male standards of "good" or "adequate" language use. The fact that women ask more questions or use more "hedges" (like "rather", "somewhat", "you know", etc.) is not a sign of their insecurity

but a mark of a more inclusive and less aggressive or dominating manner of speaking. Perhaps it is crucial to reexamine the values which underlie a certain mode of speech characterised as "male". So while the girl child should be encouraged to be assertive in class etc., she should also be taught to question these values as the only desirable ones. She must be heard and not ignored, but she must not think that the only way of doing it is by being confrontational or undemocratic. So appropriation of male prerogatives should go hand in hand with questioning the very rules of the game.

5. Not only in the realm of the spoken language have women been silenced, the written language has also been monopolized by the powerful. Women are not the only group affected by illiteracy, but gender differences in literacy rates are striking. Where education is a scarce resource it is thought more profitable to educate boys. But besides economic compulsions there are political ones too. Powerful groups fear that education can empower the powerless and incite them to protest. In this context the divide between written and oral communication becomes crucial. In modern societies the language of permanence and authority is the written language and it is privileged over the oral. This is problematic because the oral is the means of communication most easily accessible to the powerless. Perhaps both in our text books and also in classrooms we need to be a little critical of the written word in general and learn to challenge the dogmatic authority of

the book. While the students should learn to value the text, the power of the written word should not overwhelm them or deafen them to the possibilities of other forms of communication.

After a thorough discussion of the Focus Group Report and preliminary study of the textbooks, the resource persons came out with a format to analyse the textbooks of classes VIII to X of Andhra Pradesh State Board. The format was as below :

Textbook Analysis

Subject : _____ Title of the book : _____
 Class : _____ Year of Publication : _____
 Medium of Instruction : _____ Publisher : _____

Chapter No.	Page No.	Observation	Suggested Alternatives

Phase II : The workshop was held for five days from 26th of March to 30th of March at IASE, Sanskrit Vidyapeeth, Tirupathi.

The objectives of this workshop were

- to analyse the current textbooks of all subjects of Andhra Pradesh State Board of classes VIII to X.
- To prepare general and subjectwise guidelines for the textbook writers based on the findings of the textbook analysis.

The resource persons involved in the workshop were

1. Dr U Nageswara Rao
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6. Prof.G.Vijayalakshmi
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8. Prof P Subbarayan
Principal, IASE
RSV Pradhan
Tirupathi
9. Prof K Ravisankara Menon
Dean, Faculty of Education
R S Vidyapeetha
Tirupathi
10. Rajanikant Shukla
Reader, IASE
R S Vidyapeetha
Tirupathi
11. R Deepta
Sr Lecturer in English
R S Vidyapeetha
Tirupathi 517 507
12. Perikala Venkata Rao
Sr. Lecturer in Education
Rashttriya Sanskrit Vidyapeetha
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13. Dr Prahlad R Joshi
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14. Dr Mangala S M
Centre for Women's Studies
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Mysore
15. Prof K Indira
Director
International Centre
Mysore

RIE faculty

16. Dr C Jangaiah, Programme Coordinator
17. Dr G Viswanathappa
18. Dr Asha K V D Kamath

As per the time schedule, different groups worked and analysed the textbooks of Telugu and English medium of classes VIII, IX and X. Lessonwise analysis and findings of each of the subjects of classes VIII, IX and X are given in the following pages.

Subject	Classes
Telugu	VIII, IX and X
English	-do-
Hindi	-do-
Telugu	-do-
Sanskrit	-do-
Social Sciences	-do-
Mathematics	-do-
Physical Sciences	-do-
Biological Sciences	-do-

The analysis of the textbooks of different subjects has resulted in arriving at guidelines – subject specific and general, to the textbook writers. The following pages give the details.

TELUGU

Subject : Telugu

Stream : General

Class : VIII

Sl.No.	Unit	Page No.	Observation	Suggested alternatives
1	I		రచన చేసినవారు ఇద్దరూ పురుషులే ఉండుట గమనించడమైనది.	రచన చేసిన వారిలో ఒకరైనా స్త్రీ వుండినచో బాగుండును.
2			సంపాదకులు, ప్రధాన సంపాదక మండలిలో కూడ కేవలం పురుషులు మాత్రమే వుండుట గమనించడమైనది.	సంపాదక ప్రధాన సంపాదక మండలిలో కూడ స్త్రీలకు పాఠాన్యం కల్పించుట మంచిది.
3			చిత్రకారుడు కూడ పురుషుడే వుండుట గమనించడమైనది.	చిత్రకారుల విషయంలో స్త్రీలకు కూడ అవకాశం కల్పించినచో మంచిది.
4	II		IIవ పేజీలోని విషయం అంతా ఆంగ్లములో ముద్రించబడివున్నది.	IIవ పేజీలోని విషయం కూడ తెలుగులో ముద్రించినచో బాగుండును.
5		01-42	పద్య భాగమునందు మొత్తం తొమ్మిది (9) పాఠములు ఉన్నవి. పద్య భాగము నందు వున్న కవులు అందరు కూడ పురుషులే.	పద్య భాగమునందు కవయిత్రులకు (స్త్రీలకు) కూడ స్థానం కల్పించినచో ఆనంద దాయకము.
6		45-94	గద్య భాగంలో మొత్తం 10 పాఠములు వున్నవి. వాటిలో 90% పురుషులు రచించినవే గమనించడమైనది.	గద్య భాగంలో కూడ కొన్ని పాఠములు స్త్రీ రచయితలు రచించినవి అయినచో బాగుండును.
7		01-94	పాఠ్య పుస్తకములోని చిత్రములన్నియు సరిగా ముద్రించబడలేదు.	పాఠ్య పుస్తకములోని అన్ని చిత్రములు అర్థవంతంగా, బాగా ముద్రించ బడినచో బాగుండును.

Sl.No.	Unit	Page No.	Observation	Suggested alternatives
8			పాఠ్య పుస్తకం చివరి అడ్డపైన విద్యార్థుల చిత్రం పదర్పించబడినది. వాటిలో మగ పిల్లలు లేక పోవటం గమనించడ మైనది.	పాఠ్య పుస్తకం చివరి అడ్డపైన ఉన్న విద్యార్థుల చిత్రంలో మగ పిల్లలు కూడ పున్నట్లైతే బాగుండును.
9		29	10. ఉపాధ్యాయులకు సూచనలు అనే అంశమునందు పురుషులు రచించిన దేశభక్తి గీతాలను మూత్రమే వివరించమని చెప్పడం జరిగినది.	స్త్రీలు రచించిన దేశభక్తి గీతాలను కూడ వివరించమని చెప్పినచో బాగుండును.
10		56	9. కింది పదాలను పరిశీలించండి అనే అంశములో (అ, ఆ, ఇ) ఈ మూడు ఉదాహరణలు కూడ పురుష వాచకములే.	ఈ మూడు ఉదాహరణలలో పాటు స్త్రీకి సంబంధించిన ఉదాహరణ ఒకటి వుండిన మేలు.

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Subject : Telugu

Stream : General

Class : IX

Sl.No.	Unit	Page No.	Observation	Suggested alternatives
1		I	రచన చేసిన వారిలో ఇద్దరూ స్త్రీలే వున్నారు.	రచనలో పురుషులకు కూడ స్థానం కల్పించాలి.
2			సంపాదకుడు, ప్రధాన సంపాదక మండలి ఈ రెండింటిలోనూ పురుషులే వున్నారు.	సంపాదక, ప్రధాన సంపాదక మండలిలో స్త్రీలకు కూడ అవకాశం కల్పించాలి.
3			చిత్రకారుల విషయంలోనూ పురుషుడే వుండుట గమనార్హం.	చిత్రకారుల విషయంలోనూ స్త్రీలకు స్థానం కల్పించడం అభిలషణీయం.
4		II	రెండవ పేజీ (II)లో విషయం ఇంగ్లీషులో ఉంది.	రెండవ పేజీలోని విషయం కూడ తెలుగులోనే ముద్రించవచ్చు.
5.	పద్యభాగం	18	ఉపమా అలంకారానికి ఇచ్చిన ఉదాహరణలు రెండూ స్త్రీలకు సంబంధించినవే.	రామాయణంలో రాముడిని చంద్రునితో పోలుస్తారు వాల్మీకి మహర్షి. అటువంటి పురుష సంబంధమైన ఉదాహరణలు కూడ గ్రహించవచ్చు.
6	పద్యభాగం	42	ఉపాధ్యాయ సూచనలు అను అంశంలో బుద్ధునికి సంబంధించిన విషయాలు మాత్రమే గమనించడం జరిగినది.	బుద్ధుని వలె స్త్రీలు చేసిన (బోధనలు) విషయములను కూడ పరిశీలించ వలసినదిగా ఉపాధ్యాయ సూచనలో ఉండాలి.

Sl.No.	Unit	Page No.	Observation	Suggested alternatives
7	వచనభాగం	56	ఉపాధ్యాయులకు సూచనలు అను అంశమునందు అపధానాలు చేసిన పురుషులను మాత్రమే పేర్కొన్నారు.	ఉపాధ్యాయులకు సూచనలు అను అంశమునందు అపధానాలు చేసిన కొంతమంది స్త్రీల పేర్లు కూడా ప్రస్తావించాలి.
8		64	పరిచయాలు అనే అంశములో కేవలం పురుషులను మాత్రమే పరిచయం చేయడం జరిగినది.	స్త్రీ పరిచయం కూడ చేస్తే బాగుంటుంది.
9		66	ఉపాధ్యాయులకు సూచనలు :- అను అంశంలో పరిచయం చేయండి అనే అంశంలో కేవలం పురుషుల గురించి మాత్రమే వుండటం గమనించడం జరిగింది.	ఉపాధ్యాయులకు సూచనలు :- అందులో (ఆ) అనే అంశమునందు స్త్రీలను కూడా పరిచయం చేయడం బాగుంటుంది.
10	పద్యభాగం	01-43	పద్యభాగం నందు మొత్తం పది (10) పాఠములు వున్నాయి. అవి అన్నీ పురుష రచనలే.	పద్యభాగ మందు కొద్దిమంది కవయిత్రులనైనా చేర్చాలి.
11	వచనభాగం	47-95	వచన భాగంలో మొత్తం (10) పది పాఠములు వున్నవి. ఈ పది పాఠములను కూడ పురుష రచయితలే రాశారు.	(స్త్రీ) రచయిత్రి పాఠములు కూడ వుండాలి.
12	పాఠ్యపుస్తకం	వెనుక అట్ట	పాఠ్య పుస్తకం వెనుక అట్టపైన పిల్లల చిత్రంలో అందరూ ఆడపిల్లలే వుండటం గమనించడమైంది.	ఆడపిల్లలతో పాటు కొంతమంది మగ పిల్లలు కూడ వున్న చిత్రం అయితే బాగుంటుంది.
13	పద్యభాగం	5,13,18 25,31,35 38,40,42	పాఠ్యాంశము చివర (పద్యభాగంనందు) ఇవ్వబడిన సూక్తులు అన్నియు పురుష రచనలే.	స్త్రీ రచనా సూక్తులు కూడ వుంటే బాగుంటుంది.

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Subject : Telugu

Stream : General

Class : X

Sl.No.	Unit	Page No.	Observation	Suggested alternatives
1		1	రాసిన వాళ్లు ఇద్దరూ పురుషులే వుండుట గమనించడమైనది.	ఒక్క రైనా రచయిత్రి (స్త్రీ) వుండినచో బాగుండును.
2			సంపాదకులు, ప్రధాన సంపాదక మండలి వీరు కూడ పురుషులే వుండుట గమనార్హము.	సంపాదకులు, ప్రధాన సంపాదక మండలిలో కూడ ఒకరైనా స్త్రీ వుండినచో మంచిది.
3			చిత్ర రచనలో కూడ పురుషుడే వుండుట గమనించబడిన విషయం.	చిత్రకారుడుతో పాటు ఒక చిత్రకారిణి కూడ వుంటే బాగుండును.
4			VIII సంధి (సవర్ణదీర్ఘసంధి) అనే అంశంల నందు ఉదాహరణ పితృ ణం ఇవ్వబడినది.	మరియొక్క ఉదాహరణ స్త్రీకు సంబంధించినది వుండినచో బాగుండును. ఉదాహరణ మాతృ ణం.
5		07	XI అలంకారం అనే విషయమందు పురుష సంబంధమైన ఉదాహరణ మాత్రమే ఇవ్వడం జరిగినది. (ఉపమాలంకారం).	ఉపమా అలంకారము కొరకు స్త్రీ సంబంధమైన ఉదాహరణలు కూడ వుండుట మంచిది. ఉదాహరణ సతీ సావిత్రి గొప్పతనం.

Sl.No.	Unit	Page No.	Observation	Suggested alternatives
6.		12	(c) విడతీసి సంధికార్యాన్ని తెలపండి అనే అంశములనందు పురుష సంబంధమైన, మరియు అచేతనమైన వాటి గూర్చి మాత్రమే ఇవ్వడం జరిగినది. స్త్రీకి సంబంధించిన పదాలు లేక పోవుట గమనించడం జరిగినది.	సంధికార్యాల విషయంలో కూడ స్త్రీ సంబంధమైన ఉదాహరణలు ఇవ్వడం మంచిది.
7		13	VII సంధులు గుణసంధి విషయంలో కూడ అన్ని పదాలు పురుష సంబంధమైన పదాలు మాత్రమే తీసికోవడం గమనించడమైనది.	గుణసంధి విషయంలో కూడ స్త్రీ సంబంధమైన ఉదాహరణలు ఇచ్చిన బాగుండును.
8.	గద్యం	96	V కింది సమాసాన్ని గమనించండి అనే అంశములనందు పురుష సంబంధమైన ఉదాహరణలు మాత్రమే ఇవ్వడం జరిగినది.	(బహు (వీహి సమాసము) ఇక స్త్రీలలో కూడ కొన్ని ఉదాహరణలు కూడ ఇచ్చుట మంచిది. ఉదాహరణ లతాంగీ, కోమలాంగీ.
9		103	XI అంశములనందు (నిశ్చయార్థక వాక్యానికి, వ్యతిరేకార్థ వాక్యానికి) సంబంధించిన రెండు ఉదాహరణలు పురుష సంబంధమైనవే.	ఇచ్చుట స్త్రీ సంబంధమైన ఉదాహరణలు కూడ ఇచ్చినచో బాగుండును.
10.		119	IX విద్యార్థులకు సూచనలు అనే అంశములలో పరిశీలించవలసిన విషయాలు అన్ని కూడ పురుష సంబంధమైనవే. (పురుష సంబంధ స్వాతంత్ర్య సమర యోధులు).	స్వాతంత్ర్య సమర యోధులలో స్త్రీలకు కూడ ప్రాధాన్యతను కల్పించి వారియొక్క జీవిత చరిత్రలను పరిశీలించినచో బాగుండును.

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ENGLISH

Introduction

Education serves as a means of socialisation, social control and empowerment only if it caters to the empowerment of all sections of the society without bias and also only when it breaks the age-old discrimination against the marginalised like women, children and minorities. Otherwise, there is always the possibility of education becoming a means of reinforcement of the subordination of the marginalised. Hence, the directive of the NCERT to weed out gender discrimination in the textbooks.

Teaching of English or any language for that matter, in the context of gender parity and gender justice involves the following issues :

1. To see that the language used as part of texts or as part of exercises do not show gender discrimination.
2. To see that the examples given to teach various grammar topics do not reinforce gender stereotyping.
3. To see that the selections for the language texts show gender parity and gender equality.

Guidelines to the writers of the English Textbooks

The editors of the textbooks may be asked to keep the following issues in mind while selecting the text and preparing exercises for the text.

1. To avoid words reflecting gender bias like 'mankind' to represent the entire humanity and also the use of pronoun 'he' for gender neutral words like 'doctor', 'driver', etc.
2. To show gender equity in the pictures given to support the content.
3. To avoid examples which reflect gender stereotyping like "Mother is cooking", "The pretty girl".
4. To include selections on women and by women which reflect women's views and concerns.
5. To refer to women by their first name not as Mrs.Sarma, etc.

6. To have atleast one woman to be part of the editorial board in the selection of the textbooks.

Subject : English
Class : VIII
Medium : Telugu

Sl. No.	Unit	Page No.	Observation	Suggested Alternatives
1.	I	5	A doctor is shown as a man. A clear instance of gender stereotyping.	One of the pictures could be changed to present a 'woman' as a doctor.
2.	II	13	A doctor is represented by a figure of a man. Another instance of gender stereotyping as well as discrimination.	
3.	II	10	A 'kind' elephant has been given the pronoun 'he'.	Better to change the pronoun to 'it'.
4.	III	28	A 'kind' elephant has been given the pronoun 'he'.	Better to change the pronoun to 'it'.
5.	IV	30	The listening passage of "the Princess and the Pea" talks of a gentle, physically sensitive girl to be a 'real princess' – a clear instance of gender stereotyping.;	Is it not better to replace the story itself with one which tells a woman to be intelligent than physically sensitive.
6.	IV	36-37	The word 'man' is used to represent 'human race'.	Replace the word 'men' with the word humans.
7.	V	43	In the word division suggested between Mr and Mrs Daniel, gender stereotyping once again.	Mr. Daniel could be made to do some work in the example.
8.	V	47-48	Terms like man-made suggest gender discrimination.	Replace it with human-made.
9.	V	58	The example 'Talk of Queen' also. But the picture of a King alone is given.	Supply the picture of a queen too.
10.	IX	87	The lesson addresses the student. But the pictures show the student to be a boy.	Include the pictures of women, rowing or running.

Subject : English
Class : IX
Medium : Telugu

Sl. No.	Unit	Page No.	Observation	Suggested Alternatives
1.	I	5	Reading passage colonialist in attitude.	Remove the story, replace it with another or at least remove the last three lines.
2.	II	10	Listening passage gender discrimination in using man to represent all humanity.	Replace man with 'human'.
3.	VII	64	Stereotyping in referring to 'policeman'.	Could sometimes use the example of police women too.
4.	III	23	Speaking Exercise – A typical instance of gender stereotyping –Mother cooking and father doing some important work.	Remove the term "some important work" as well as "Mother cooking". Instead other activities like reading or writing could be included in the example.

Subject : English Reader
Class : X
Medium : Telugu

Sl. No.	Unit	Page No.	Observation	Suggested Alternatives
1.	I The King and the Tamarind Drum	P.8 Learning words - 1	The exercise is an example of gender stereotyping.	An exercise on adjectives (other adjectives in the lesson can be given).
2.	4	p.35 (2(c)) - pair work	The exercise "Lakshamma burn/ her fingers when she/cook lunch yesterday – a typical example of gender stereotyping.	Change the exercise to Lakshamma/ burn/ her fingers/ when she / try / to put fire out.
3.	5	41 Listening passage.	The passage talks of the experience of Satish and Meena. But it is Satish alone	Change the narrator Satish to narrators Satish and Meena.

			who narrates the story as "We".	
4.	5	p.49	The poem "Bangle Sellers" may be a famous poem but it reinforces gender stereotyping.	Better to replace the poem with another.
5.	6	51-57	The unit 6 has two profiles of famous men. It also gives the names of cricketers and scientists, all men – a clear case of gender discrimination.	It is necessary to include at least one profile of a famous woman and list out women scientists along with men scientists.
6.	Picture on the cover		The pictures drawn are 1. Tutankhamen 2. King 3. Gender bias	The cover page can carry women writers/ characters who are part of the selections of this text like Sudha Chandran or Emily Dickinson.

Subject : English Reader
Class : VIII
Medium : English

Sl. No.	Unit	Page No.	Observation	Suggested Alternatives
1.	I	p.6	Writing : has reference only to Hindu festival.	Can include festivals of other religions.
2.	1	p.1.	Girl is described "nice" and "pretty" – gender stereotyping.	The adjectives can be removed.
3.	4	p.21	'Man' is used to represent human beings.	Can be replaced by the word human beings.

Observation on the selected Units of the Text :

Except for the lessons – 1. Wealth from the Ground, 2. The Universe – which are gender neutral and the poem

"Home they brought Her Warrior Dead" which refers to a woman's plight as a soldier's widow, all other lessons seem to present the stories of men and their point of view which is out and out biased as well as discriminatory.

Suggestion : It is better to revise the entire text not to just include women as part of the study or just as a part of the unit but to represent their points of view equally.

English Supplementary Reader I

Class VIII

Great Expectations presents the story of a Philip Pirip as he grows to a young man. Though, a classic, this text as part of the syllabus for VIII class makes the syllabus one sided, biased and discriminatory.

Suggested Alternative : Better this text is replaced by another more gender neutral.

Subject : English Reader

Class : IX

Medium : English

Sl. No.	Unit	Page No.	Observation	Suggested Alternatives
1.	I	8 At the Theatre	The poem is gender discriminatory as woman is called 'half wit' and 'foul woman'.	Replace the poem with another.
			The rest of the lessons are gender neutral. No lesson with women's point of view.	

Subject : Supplementary Reader

Class : IX

Sl. No.	Unit	Page No.	Observation	Suggested Alternatives
1.	8	56	The use of "pretty" girl suggests gender stereotyping.	The adjective could be removed.

Supplementary Reader 2

Huckleberry Finn

First person narrative from the point of view of a boy. Does not have anything which represents woman's point of view.

Subject : English Reader (Main Reader)

Class : X

Medium : English

Sl. No.	Unit	Page No.	Observation	Suggested Alternatives
1.	II (In celebration of being alive)	13 (Language study)	For teaching tenses, anecdotes of only men-writers have been used indicating gender discrimination.	Can include an anecdote or two from the lives of famous women – writers like Jane Austen, Virginia Woolf, etc.
2.	II (Circus Cat, Alley Cat)	22 (Language study) (7)	"Managing Director" is represented as 'he' – an instance of bias as well as stereotyping.	Why cannot a managing director be a woman ?
3.	III (Circus Cat, alley Cat)	23 (Language Study) (10)	Mentions 'spokesman'.	Can be changed to spokesperson.
4.	IV Mother Teresa.	32 (Word Study (b))	Describes 'Cab-driver' to be a Man who drives a cab.	Should be changed to "a person who drives a cab".
5.	IV	35 (The Gallows)	Describes 'keeper' as "a man whose duty is to protect the birds and animals on private land".	Should be changed to "a person whose duty is to protect the birds and animals on private land".
6.	V (The Case of the Defence)	p.44 (Language study) 3(b) (vi)	A comparison is made between 'Mother' and 'automation'. It is a clear instance of Gender Discrimination.	Remove the sentence.
7.	VII Fire in the forest	p.64 Language Study (12)	In a generalisation on human beings are referred to as 'man'.	Replace 'man' with human being and He with S/he.

8.	VIII Vinoba	p.74 (Upagupta Notes and Meanings.	'Ascetic' is described as a person who does not allow himself bodily pleasures.	Replace himself with himself/ herself.
9.	IX The Beautiful White Horse	p.87 Language Study 4(2) and (9)	Jokes on women a typical instance of gender stereotyping as well as discrimination.	Can be removed.
10.	X Knowledge and Wisdom	p.97 Word study (b) 7	The word 'house keeper' is word of bias and does not recognise the work done by women at home.	Change 'house keeper' to 'home maker'.

Subject : English Supplementary Reader I Hound of Baskervillies

Class : X

Medium : English

Sl. No.	Unit	Page No.	Observation	Suggested Alternatives
			Contains on the whole gender neutral use of language	

Subject : English Supplementary Reader II

Class : X

Medium : English

Sl. No.	Unit	Page No.	Observation	Suggested Alternatives
1.	3 The day the Viceroy came.	p.23	The meaning of spouse is given as wife.	It should be "either husband or wife" here 'wife'.
2.	5 Grooming	p.56 A Comprehension (4)	'man' is used to represent the entire human race.	'man' be changed to 'human being'.
3.	5 Grooming	p.56 Vocabulary (B)	All the examples given have names of men – Gender discrimination.	Supply some names of women for example. 1. Ram works in a factory be changed to Sita works in a factory.

HINDI

उपर्युक्त कार्यक्रमानुगत आन्ध्रप्रदेश के कक्षा ८, ९, १० की हिन्दी पाठ्य पुस्तकों का अवलोकन किया इस में बहुत सारी महिला विषयक बातें देखने को मिली। जिसका विवरण दिया जा रहा है।

१. लेखक
२. सम्पादक
३. पत्रलेखन
४. नीति-दोहे
५. विभिन्न चित्ररू
६. विभिन्न वाक्य
७. वैज्ञानिक
८. महिला सन्त
९. महिला लेखिका

उपर्युक्त शीर्षकों से सम्बन्धित विषय पुस्तकों में है जिनके बदलने की आवश्यकता है। कुछ पाठ बदलने की आवश्यकता है, विवरण में लिखा है। तथा ८, ९, १० कक्षाओं की पुस्तकों में विभिन्न पाठों में प्रयुक्त वाक्यों, विचारों, स्थलों पर परिवर्तन की जरूरत है।

अतः उपर्युक्त विभिन्न विषयों में महिला की प्रधानता, व शब्दों को जाड़ना, प्रसंगानुसार नया शब्द करना नूतन चित्रों में महिला को स्थान देना आवश्यक है तथा निर्दिष्ट किया गया है। समयानुसार नूतन पुस्तक में परिवर्तन किया जा सकता है।

SUBJECT - HINDI
CLASS -8
MEDIUM -HINDI

UNIT	PAGE NO.	OBSERVATION	SUGGESTED ALTERNATIVES
—	कं.....	लेखक तथा सम्पादक मण्डल में सभी <u>पुरुष</u> नाम है।	लेखक तथा सम्पादक मण्डल में <u>महिला</u> का नाम होना चाहिए।
1	1	भारत के मानचित्र में सभी पुरुष हैं।	मानचित्र में <u>पुरुष</u> के साथ महिला का स्थान भी होना चाहिए।
6	2-22	पिताजी को पुत्र का पत्र <u>आज्ञाकारी पुत्र</u> लिखा है।	<u>आज्ञाकारी पुत्री</u> भी कर सकते है।
11	39-41	सभी चित्रों में <u>पुरुष</u> कार्यरत हैं।	कार्यरत <u>महिला</u> का स्थान भी होना चाहिए।
12	44-45	पत्रलेखन-2 अध्यापक का छात्र के नाम है।	<u>अध्यापिका</u> का <u>छात्रा</u> के नाम भी
14	51	राखी ————— बहिनों की तुम लाज बचाना।	राखी ————— बहिनों की तुम इज्जत मान बचाना भी हो सकता है, दूसरी कवि की कविता जोड सकते हैं।
22	79-81	उगादि विषयक पाठ में सुरेश एवं कृष्णाराव दोनोंका छात्र (पुरुष) हैं। नीति दोहें में सभी पुरुष हैं।	दोनों छात्रों में <u>रुक्</u> छात्रों स्थान होना चाहिए।
23	83-85	नियांग भी स्थान आवश्यक हैं। अन्तिम कबर पृष्ठ पर नल चलाती हुई सहिला का चित्र है।	अतः नीति दोहें विषयक पाठ मे पहिला कविर्यो का स्थान अवश्यक है। नल चलात हुए पुरुष का चित्र हो सकता है।

SUBJECT -- HINDI
CLASS -- 9
MEDIUM – HINDI

UNIT	PAGE No.	OBSERVATION	SUGGESTED ALTERNATIVES
—	अन्दर (इत्रर पेज)	लेखक व सम्पादक मण्डल में सभी पुरुष हैं।	लेखक व सम्पादक मण्डलमें <u>महिला</u> का स्थान भीजोड़ा जा सकता हैं।
2	5 (a)पंक्ति	(1) रामू की बहू ——— अपराधिनी की भौंति बाते सुनती रहीं।	-अपराधिनी शब्द प्रयोग बदल सकते है
		(2) को <u>बहू</u> मारती है.....	-..... बहू के स्थान पर किसी बच्चे का नास भी हो सकता है।
		(3) प्रायश्चित	इस पाठ को बदल भी सकते हैं।
	(8) (4)	फिर इससे ——— <u>बहू के पाप</u>	ऐसे शब्दों को प्रसंगानुसार बदल सकते है
4	13-15	<u>पिता का पुत्र के नाम पत्र है।</u>	<u>पिता का पुत्री के नाम भी पत्र हो।</u> सकता है।
7	24	पदत चित्र के <u>सभी पुरुष</u> है।	चित्र में सक्रिय <u>महिला का स्थान</u> भी होसकता है।
8	29	--- दीवाला	
12	44(13)	यह कौन है ? क्या साक्षात ——— सभी <u>स्त्रीयो</u> हैं। <u>स्त्रीयो</u> का वध करना पड़ेगा। -- स्त्रीवध नहीं।	<u>वध शब्द</u> बदलकर सम्मान जनक <u>महिला सैनिकों से पराजय का प्रयोग</u> करना चाहिए।

- 13 50-53 पुत्र का पिता के नाम पत्र है। पुत्री का पिता में नाम पत्र होना चाहिए।
- 14 56 दिये गये चित्र में साइकिल चलाते हुए पुरुष है। साइकिल सवार महिला का भी चित्र हो सकता है।
- 15 64 (8) तीज बंजारा — कुवाँरी लड़कियों का सबसे—। वर्तमान परिस्थिति के अनुसार परिवर्तन करना चाहिए।
- (15) बंजारा — संध्या समय युवा लड़कियाँ। टांडे के नायक के घर में जमा — हू जाते हैं। — युवा लड़कियाँ — टांडे के नायक घर जामड़ के स्थान पर सकप्रित हो गया हैं। ऐसा होना चाहिए।
- 16 68 चित्र बसन्त का है ? चित्र में बसन्त ऋतु में महिला व पुरुष का स्थान आवश्यक
- 17 71-73 प्राचीन वैज्ञानिक का नाम है ? प्राचीन वैज्ञानिक के साथ आधुनिक वैज्ञानिक तथा महिला वैज्ञानिक का नाम नयोगदान होना चाहिए।
- अन्तिम कवर पृष्ठ अन्तिम कष्ठ पृष्ठ पर नल चलाती हुई महिला का चित्र है। उस चित्र में नल चलाते हुए पुरुष का चित्र चिस्त्र हो सकता है

SUBJECT .
CLASS
MEDIUM -

UNIT PAGE No. OBSERVATION

5 (पद्य) 9(5)पांची मे ही हूँ गरिबि ऐसी -----
" 10(16) इसी ----- मिखारिन -----

4 (गद्य) 33-35 भाई का पत्र भाई के नाम ----- है।

Prase

p

6 42(18) धन्य तुम्हारा ----- उर्वरा

11 66(4) रामेश्वरी मुँह मटकाकर बोली। करना चाहिए।

11 67(5) ----- बापू साटब ----- मूर्ख स्त्री के मुँट
लगना तीर नहीं।

69(7) रामेश्वरी ----- कुढ़कर बोली।

----- तुम्हारी समय क्ो क्या हुई

----- नाम चलेगा।

73(3) मेरे आते ही ----- गिटगिट-----

की तरह रंग बदलने लगी।

-- HINDI

-- 10

- HINDI

SUGGESTED ALTERNATIVES

अन्य लेखक की कविताएँ तथा

अर्चक पर का प्रयोग होना चाहिए।

भाई का पत्र बहन के नाम हो सकता है।

— उर्वरा से दैमान पद का प्रयोग कर सकते हैं।

टकाकर इस पर के स्थान पर किसी अच्छे पर का प्रयोग

अच्छे दरों में प्रयोग..... पाठ होना चाहिए।

15
99

महिला के लिए ऐसे पदों का प्रयोग बदलना चाहिए।

SANSKRIT

1. While selecting texts from original work care should be taken to select non controversial issues.
2. In pictures – Both Boys and Girls picture may also be added.
3. In lessons like drama, dialogue the roles may be played by both boys and girls.
4. In editorial board at least two women should be added.
5. Dramas written from modern woman poets may also be included.

STREAM – GENERAL SANSKRIT

CLASS VIII

VIII – GENERAL SANSKRIT

Unit Prose	Page No.	Observation	Suggested Alternatives
2	22	Dialogue Mother -Son	Mother – Son and Daughter can also be included.
3	26	Dr. Sarvepalle RadhaKrishnan - Biography	Biography of women may also be added.
7	45	Lesson on Television Picture- Television Inside picture of a man.	

IX SANSKRIT – GENERAL

Unit	Page No.	Observation	Suggested Alternatives
5	38	Letter writing Boy writing letter to his father	A girl may also be added
7	44	दशपुत्रसमो द्रुमः! (A tree is equal to 10 son's)	
	45	सुपुत्रो यथा पितुः सेवामा चरति, ततोऽपि अतिशयितां सेवां- कुर्वन् वृक्षः - दशपुत्रसमो - भवति । As a good son services the father, the tree serves more than that, so it is equal to ten sons.	The word 'सुपुत्र' can be replace by सुसन्तानः, सुसन्ततिः, अपत्यम् ।
	46	Verse – दशपुत्रसमो द्रुमः!	

X – SANSKRIT GENERAL

Unit	Page No.	Observation	Suggested alternatives
2	5	Verse -5 पुत्रकाम्यया The couple went to sages Ashram to get his blessings (to have a son)	
3	14	Verse -27 भवन्त्यव्यभिचारिण्ये भर्तुरिष्टे पतिव्रताः	

Part II Prose 1	33 (9)	भगवतः कृपां सम्पाद्य पुत्रं प्राप्स्यावः Let us pray god to have a son	
3	43	A man sitting on a Arm chair reading a paper.	

**SANSKRIT
STREAM – TRADITIONAL
CLASS - VIII**

Unit Poetry	Page No.	Observation	Suggested Alternatives
12	41	Verse (4): STORY It is said that women always quarrels with husband in home.	
Prose 4	10.2	Letter writing Boy to Boy	
8	154	All the characters are Boys (Drama)	
11	200	यदि पुमान् - पालकादी भूत्वा It man wants to go to heaven.....	

**SANSKRIT
STREAM- TRADITIONAL
CLASS – IX**

Unit Poetry	Page No.	Observation	Suggested Alternatives
2	7	Verse (4) . . . कुलं - कुलनयात् विनश्यति The family will be destroyed by a bad son.	
8	49	Verse –8 Women's are added in the list of	

		entertaining items	
5	147	All roles are played by boys	
11	198	Verse - भवतु कापि - कादम्बिनी	

SOCIAL SCIENCES

Introduction

Gender equality is one of the basic human values and the Focus Group on Gender Issues in Education of NCF 2005 has made a detailed report on Gender, Equality, and Empowerment. The gender issues are mainly of gender sensitivity, gender stereotype, gender discrimination, gender equality, gender parity and gender justice. As textbooks are important means to impart education at school level, it is necessary to analyse how gender issues are discussed in the school textbooks, especially in the secondary school textbooks.

Social Sciences is one of the curricular areas in school education. It draws its content from history, geography, political science, economics, sociology and anthropology and intends to enable students to develop a critical understanding of society. The social sciences also carry a responsibility of creating a strong sense of human values and generating in students a critical, moral and mental energy to make them alert to the social forces that threaten those values.

In the following pages an attempt has been made to analyze the existing Social Sciences text books of class VIII, IX and X of Andhra Pradesh, keeping in mind the gender issues.

They give the details and also specific suggestions for improving the textbooks by modifying the ways of presenting the gender issues indirectly and their convincing treatment in various contexts.

Based on the analyses of the Social Sciences text books and the Focus Group Report on Gender Issues in Education a few guidelines have been drawn for strengthening the hands of the text book writers in dealing with gender issues.

Social Sciences

Guidelines on Gender Issues

The Text book writers of Social Sciences are requested to consider the following guidelines with regard to gender issues.

- **Avoid Gender discrimination.** Gender discrimination is obviously seen throughout the text book. For example while discussing about freedom struggle of India, though many women have participated in the struggle, the lesson indicates only Anne Beasant and Arccudale. But there is a need to give greater description.
- **Avoid Masculine terms and use neutral terms.** If it applies to both the genders. In many of the civics lessons, the head of government is indicated by 'he' but can be replaced by 'person' or he/she.
- **Gender equality to be shown while drawing the pictures** wherever possible show both the genders almost equal in number and give equal treatment for example in the diagram of state executive all members seem to be 'men' and then is a need to depict women also.
- **Provide gender justice.** Though men and women take responsibility in the society, the work done by men are enumerated but not of women. For example, the lesson on cultural heritage of India gives the detail description of contributions of men only. It is also necessary to find out and write about the work done by women also.

Subject : Social Studies
 Class : VIII
 Medium : English
 Year of Publication : 2006

Part Name Unit No	Page No.	Observations	Suggested alternatives
H-III	51	Among the 15 members involved in writing the textbook only two are women.	Some more women experts need to be included.
H-IV	82	Under places of Interest in Tirupathi S.V University is mentioned but Padmavathi University is missing	Padmavathi Mahila University has to appear in the list of institutions.
H-V	86	A reference is made to Queen Victoria of England	
	90	In fig. 10 only men are drawn and not a single woman is found.	Is it not fair to draw women too? Bogie model is important or travelers is important?
H-VI	96	Under literature, languages and arts contributions of only men are discussed	Role of women are also to be narrated
C-II	123-131	Role of Annie Besant is setting up Theosophical Society and Home Rule movement is mentioned	If there are some more ladies at the local level who strived towards independence may be included.
E-III	174	There are nine photographs of people but only one is of a woman.	Is it possible to introduce to the students a few more women socialists'.
		Ajay bought 1 Kg of Mangoes	It could be as Ajay and Annie went together and bought 1 Kg of mangoes.

H : History

G: Geography

C: CIVICS

E: ECONOMICS

Subject : Social Studies

Class : IX

Medium : English

Year of Publication : 2002

Unit	Page No.	Observations	Suggested alternatives
H-1	73	<u>Man's</u> civilization, <u>Man</u> used, <u>Man</u> was a food gatherer	'Man' can be replaced by 'people'
H-1	74	Man reached the stage of food producer	It is better to use the word 'people'.
H-2	78	Man's hunter - stage	It can be written, as hunter stage of 'people/ Human beings'
H-3-4,5	81-117	No content related to women is being observed in the units.	A search is to be made for role of women during those periods and accordingly show it in the text book.
C-I	141	There is a mention of women participation in the Constituent Assembly	A mention of names of those women members and the work done by them as a member of constituent assembly may be highlighted.
C-II	151-152 150	'Rastrapathi' is depicted by He many times Picture depicts only men.	A gender free word may be coined for ' Rastrapathi'. Women representation should also be shown.
C-III	168	Women representatives are shown through pictures in the State Assembly and council, but none is shown in State executive and Judiciary.	A few women pictures have to be show under executive and judiciary organs of the government.
C-III	170	Content dominated by the term 'he'	'He' can be replaced by 'person'
C-IV	185 187 189-193 196-199	Mandal Development officer is a 'male' Chief Executive Officer is a male. All chief's are males Pictures are gender fair content is dominated by 'he'	Is it not possible to address a few positions to women? He to be replaced by 'person'

Subject : Social Studies
Class : X
Medium : English
Year of Publication : 2002

Unit	Page No.	Observations	Suggested alternatives
G-4	30	Many of man's activities	Activities of People
G-5	33	With regard to man and animal interference	With regard to interference by animals and <u>humans</u>
H-5	188-190	Prominent personalities of the world. All the 10 referred to are men	Some women personalities are also to be included.
H-6	192-202	Under cultural heritage of India contributions and achievements of only men are described	Contributions of women especially to art, bhakti and administration need to be described
H-7	204-217	In the freedom movement of India, among women only the names of Anne Beasant and Arundale have a reference, though a large number of women actively participated	Various roles played by Indian women in the freedom movement has to be described
C-3	238	When a <u>person</u> is illiterate, <u>he</u> cannot read and write	When people are illiterate, <u>they</u> cannot read and write

Subject : Social Studies
Class : VIII
Medium : Telugu

First Published 1996
New impressions 2004
Printed at Prajasakti Daily
Printing Press, Hyderabad.

Part & Unit No.	Page No.	Observations	Suggested alternatives
	Front Page	3 male figures found at cover page. No women representation.	Jhansi Lakshmi Bhai Photo can be printed.
		14 members involved in writing the text book, except 2 women all are men.	Equal proportion at women can be given in writing the text book.
Geo-Graphy- III	57	అంధ్రప్రదేశ్ - భూగోళశాస్త్రంలో ధర్మనియ ప్రదేశాలలో తిరుపతికి సంబంధించిన సాతాంకంలో శ్రీపద్మ శతీ మహిళా విశ్వవిద్యాలయం గూర్చి ఎటువంటి information లేదు.	అంధ్రప్రదేశ్ లోని వీక్షక మహిళా విశ్వవిద్యాలయం. So, this information should be included.
	103	In this Unit, 3 photos were printed, all were men photos, no woman photo.	హోదాల దీర్ఘమం పేజీలో తినిబెసెలట్ ఫోటో 9 ప్రాంతం చేస్తే బాగుంటుంది.
Economics	164	In the first paragraph పర్వత తయారై దర్భపనివాడు బియ్యం కావాలంటే వ్యవసాయదారుడు In the second paragraph, ఓ వ్యవసాయదారుడు తనకు గల పరిమిత మగు పొలంలో పండిస్తున్నాడని అనుకోవండి. ఒక వేళ అతడు గోధుమలను పండిస్తే కూడా బావాలాడని అర్థమవుతుంది. పండిస్తుంటే పండితం గోధుమలను తరచు పండించలేడు. In the last paragraph the last but one line. వీని లాభాన్ని ప్రతి వ్యక్తి పొందుతారు.	The word దర్భపనివాడు can be changed as దర్భి. వ్యవసాయదారుడు వ్యవసాయం చేసే వ్యక్తి. వ్యవసాయదారులు తనకు గల పరిమిత మగు పొలంలో పండిస్తున్నారని అనుకోండి. ఒక వేళ వారు గోధుమలను పండిస్తే కూడా బావాలాడని అర్థమవుతుంది! పండిస్తుంటే పండితం కాదు పాడు గోధుమలను పండించలేరు కదా! Can be changed as బిని లాభాన్ని ప్రతి ఒక్కరూ పొందుతారు.
	165	In the last paragraph, ఎదిక చేసుకొనివాడు మానవుడు నా సేవచేవాడు నేటి మానవుడు నిరసింపగలుగుతున్నాడని అర్థమవుతుంది. చుట్టూ లభించే సామగ్రిని వాడుతున్నాడు. తన శారీరక శక్తులతో దీర్ఘాయుషి చేస్తున్నాడు. దీర్ఘాయుషి అతడు వాడైన వనరులు ఆర్జించుతాడు.	Can be changed as ఎదిక చేసుకొని వాడు మానవులు నిరసింపచేసారు నేటి మానవులు నిరసింప గలుగుతున్నారు చుట్టూ లభించే సామగ్రిని వాడుతున్నారు తమ శారీరక శక్తులతో వైశువ్యాంశ దీర్ఘాయుషి చేస్తున్నాడు. దీర్ఘాయుషి అతడు వాడైన వనరులు ఆర్జించుతాడు.
		The below stated words have been used in domination of masculine gender. They can be changed into plural to avoid gender bias.	

	168	<p>స్వవేదకుడు సరిమంటా మాటలను తిప్పి వ్యవసాయ బాదులు వరి సంతా మాటలను పరి తీర్చిదిద్దారు. పరి భాషాన్ని విల్లుయజులు వారు పరి తీర్చిదిద్దారు. పరి భాషాన్ని బియ్యంగా మారుస్తాడు వర్తకుడు బియ్యమును మిల్లు యజమాకులు బియ్యంగా మారుస్తారు. వినియోగదారుకు అమ్ముతాడు. అదేవిధంగా వర్తకులు బియ్యమును వినియోగదారుకు అమ్ముతారు. అదేవిధంగా వర్తకులు వినియోగదారులకు అమ్ముతారు. అదేవిధంగా వర్తకులు వినియోగదారులకు అమ్ముతారు. అదేవిధంగా వర్తకులు వినియోగదారులకు అమ్ముతారు.</p>	<p>వ్యవసాయ బాదులు వరి సంతా మాటలను పరి తీర్చిదిద్దారు. పరి భాషాన్ని విల్లుయజులు వారు పరి తీర్చిదిద్దారు. పరి భాషాన్ని బియ్యంగా మారుస్తాడు వర్తకుడు బియ్యమును మిల్లు యజమాకులు బియ్యంగా మారుస్తారు. వినియోగదారుకు అమ్ముతాడు. అదేవిధంగా వర్తకులు బియ్యమును వినియోగదారుకు అమ్ముతారు. అదేవిధంగా వర్తకులు వినియోగదారులకు అమ్ముతారు. అదేవిధంగా వర్తకులు వినియోగదారులకు అమ్ముతారు.</p>
	169	<p>In the mid of the lesson వినియోగదారుడు దీనిని చెల్లినాడు. టోకు వర్తకుడు లాభాన్ని గడిస్తాడు.</p>	<p>వినియోగదారులు దీనిని చెల్లిస్తారు. టోకు వర్తకులు లాభాన్ని గడిస్తారు.</p>
	170	<p>వివృక్తి యైనా తనకు తనగా విటని సమకూర్చుకొనలేడు</p>	<p>వివృక్తి యైనా తనకు తనగా విటని సమకూర్చు కొనలేదు.</p>
	171	<p>చిల్లర వర్తకుడు ఎక్కువ ధరకు విక్రయించి లాభాన్ని గడిస్తాడు.</p>	<p>చిల్లర వర్తకులు ఎక్కువ ధరకు విక్రయించి లాభాలను గడిస్తారు.</p>
	173	<p>సంఖ్యాసంబంధాల The two exercises gave with masculine domination. క్రొమికుబంటి తన క్రమమును ఉత్పత్తి కొరకు వాడుకునేవాడు.</p>	<p>The exercises should be modified with neutra gender (or) equal proportion of importance should be given. క్రమకులుంటే తన క్రమమును ఉత్పత్తి కొరకు వాడుకునేవారు.</p>
II	174	<p>In the example బాబిని త్రవ్వేవారు రోడ్డును నిర్మించేవారు రోగాన్ని నయం చేసేవారు విద్య నేర్పేవారు</p>	<p>బాబిని త్రవ్వేవారు రోడ్డును నిర్మించేవారు రోగాన్ని నయం చేసేవారు విద్య నేర్పేవారు</p>
	176	<p>కంపెనీ పెద్దాడై ఉపసరస్థులను ఒక్కడే. ఉత్ పెద్ద మొత్తాన్ని సమకూర్చలేడు. 'ఏకయాజనుస్థంబం' complete గా యజమానిని అర్థమిద్దానానా విభావించి explain చేయబం 201000.</p>	<p>It should be changed. కంపెనీ పెద్దాడై ఉపసరస్థులను ఒక్కడే ఉత్ పెద్ద మొత్తాన్ని సమకూర్చలేదు.</p>
III	183 - 191	<p>యూరిట్ పూర్తిగా వినియోగదారుడు, తీర్చిదిద్దారుడు అతడు. అనే సంకల్పములు గలవు.</p>	<p>Gender విధి express కానివిక neutral గా రాస్తే బాగుంటుంది.</p>
	192	<p>క్రియాసంహా ఉజయ అని male ని mention చేసారు.</p>	<p>Should be changed.</p>
IV	193	<p>భూయబమాని</p>	<p>Female representation should be increased.</p>
	194	<p>వ్యోనారస్తుడు } అన్ని } male</p>	

	195	స్నేహితునికి ఉప్పు	} rephrasing- tation తెలుగు శైలిలో
	196	వరకుడు	
	198	ఉల్కాసంఘాతి ప్రశ్నలు	

Subject : Social Studies
Class : IX
Medium : Telugu

First Published 1997
New impressions 2006
Printed at Odin Press(P)
Ltd. , Hyderabad.

Unit	Page No.	Observation	Suggested Alternatives
Geo - Graphy IV	22	The statement that " <u>మన నవ్వడు</u> సుర్తింపై భూకంపాలు చాలావరకు భూపటంతోనే	In this statement the word.. <u>మన నవ్వడు</u> can be converted as <u>మన దృ</u>
VI	35	The statement ఇతర జీవరాశి కంటే... భిన్నంగా... ఆలోచన. మరలము వివేచనా సామర్థ్యం కలిగిన మన నవ్వడు తొను-శాస్త్ర మరలము సావితక రంగాలతో, ... మెరుగు పరచుకున్నాడు Gender biased.	This statement can be changed as ఇతర జీవరాశి కంటే భిన్నంగా ఆలోచన మరలము వివేచనా సామర్థ్యం కలిగిన మనుషులు తొనుం మెరుగు పరచుకున్నారు.
	36	In the last line <u>మన నవ్వడు</u> శోచిస్తున్నాడు	Can be converted as మనుషులు శోచిస్తున్నారు.
	37	The first line ' <u>మన నవ్వడు</u> సాంధ్యకాలే, అర్ధక, ... ప్రకాశి సాధించాడు'	Can be the words <u>మన నవ్వడు</u> సాధించాడు Changed into <u>మన దృ</u> , సాధించడం కలిగింది.
	79	In the second paragraph ప్రముఖులతోనూ <u>మన నవ్వడు</u> అభివృద్ధిని సాధించాడు.... అభివృద్ధిని కలిగించాడు	This can be converted as మనుషులు అభివృద్ధిని సాధించారు అభివృద్ధిని కలిగించారు
	80	In the paragraph of 'భూమిపై ప్రాచీన కాల ఆవిష్కరణ' the last line చెవరగా <u>మన నవ్వడు</u> అవిర్భవించాడు	This can be changed as చెవరగా <u>మన నవ</u> భూమి అవిర్భవించింది.

81	<p>In the 'పాఠశాల' paragraph <u>మానవుడు</u> ఆహార సేకరణ చేసేవాడు, ... ఆత్మరక్షణకు వాడు శ్రాంతివాడు, ... దేశదీప్యతలకు జీవన్ముఖ ప్రపంచవాడు</p>	<p>మానవులు ఆహార సేకరణ చేసేవారు, ఆత్మరక్షణకు వాడుతున్న వారు, దేశదీప్యతలకు గం జీవన్ముఖులైవారు.</p>
82	<p>The statement 'మానవుడు' నిప్పును ఉపయోగించడం తెలుసుకున్నాడు.</p>	<p>Can be changed మనస్సు నిప్పును కనుగొనడం, ఉపయోగించడం జరిగింది.</p>
83	<p>In the paragraph of 'కౌత్సల్యము' <u>మానవుడు</u> ఆహారాన్ని ఉత్పత్తి చేసి దానిని తింటున్నాడు, మానవుడు జీవ దానిని తింటున్నాడు.</p>	<p>మనుషులు ఆహారాన్ని ఉత్పత్తి చేసి దానిని తింటున్నారు. మనస్సు జీవ దానిని తింటున్నాడు జరిగింది.</p>

Unit	Page No.	Observations	Suggested Alternatives
II	88.	In the first paragraph వీరి సమీక్ష క్రింది వర్ణన వారసత్వం ... సాధించగలిగారు.	వీరి సమీక్ష క్రింది వర్ణనను రంగులంకనాల మనస్సులు అభివృద్ధి సాధించడం జరిగింది.
	89 90	వారసత్వం	మనస్సు.
III IV	91 to 113	No information regarding Women status. No representation of women in any civilisations except in Inkas	
III	99.	In ancient African civilisations మొదటి మధ్యటి వారసత్వం అభివృద్ధి కలిగింది నివసించే వారసత్వం తెలియచున్నారు.	మొదటి మధ్యటి మనస్సు అభివృద్ధి కలిగింది నివసించే వారసత్వం తెలియచున్నారు.
V	119	In last lines of page వారసత్వం అను మధ్యటికి రిపబ్లికన్లు అనుకున్నాడు. అక్షరాలను రహస్యాలను తెలుసుకున్నారు, అక్షరాలను సంబంధించిన భాషను అలవరించుకున్నారు.	వారసత్వం అను మధ్యటికి రిపబ్లికన్లు అనుకున్నాడు. అక్షరాలను రహస్యాలను తెలుసుకున్నారు. అక్షరాలను సంబంధించిన భాషను అలవరించుకున్నారు.
Civics I	149	In the second paragraph, representations was given to minority religions, backward classes & women in the constituent Assembly. But not mentioned any women name in the main members.	Information should be enclosed
II	157	No women representation in the figure of central government	Figure should be modified with women representation.
	158.	the term రాష్ట్రపతి	The word itself should be changed.

Unit	Page No.	Observations	Suggested Alternatives
	158.	రాష్ట్రపతి చలాయించారు, ఎన్నుకొంటారు, ఏదో చూడండి, కలిగి ఉంటారు.	చలాయించారు, ఎన్నుకొంటారు, ఏదో చూడండి, కలిగి ఉంటారు.
	159 164 165 166 173 175 176 177	In qualifications అంటారు భారత వీరుడై ఉండాలి.	అభ్యర్థి భారత పౌరసత్వం కలిగి ఉండాలి.
II	160.	అధికారికంగా అని నిధులు పంపిణీ చేయడానికి అధిక సంధాని నియమిస్తాడు.	అధిక సంధాని నియమిస్తారు.
	161	రాష్ట్రపతి నియమిస్తాడు, ఎంపిక చేస్తారు, మంత్రి మంజూరి నాయకుడు, అభ్యర్థకుల పహిస్తారు, అంతా సభ నాయకులు.	రాష్ట్రపతి నియమిస్తారు, ఎంపిక చేస్తారు, మంత్రి, మంజూరి నాయకులు, అభ్యర్థకుల పహిస్తారు, అంతా సభ నాయకులు అధినేత.
	162.	అధికారాలు చేలాయించారు. కీలక పంపిణీ, పహిస్తారు, రాష్ట్రపతి నియమిస్తారు చేస్తారు.	అధికారాలు చేలాయించారు. కీలక పంపిణీ పహిస్తారు, రాష్ట్రపతి నియమిస్తారు చేస్తారు.
	165	సభాద్యక్షుడు నిర్ణయం. పు బలు చేస్తారు.	సభాద్యక్షులు నిర్ణయం చేస్తారు.
	166.	In the last lines. రాష్ట్రపతి వ్యయమాంతులను నియమిస్తారు కానీ తోలగింపలేదు.	రాష్ట్రపతి వ్యయమాంతులను నియమిస్తారు కానీ తోలగింపలేదు.

Unit	Page No.	Observations	Suggested Alternatives
	167	రాష్ట్రపతి న్యాయ మూర్తులను తొలగిస్తాడు	రాష్ట్రపతి న్యాయ మూర్తులను తొలగిస్తారు.
	168	మంత్రి మండలి నాయకుడు	మంత్రి మండలి నాయకులు
	169 } 170 }	fill up 3, 4, 10, 13 జూరి చేస్తాడు, నాయనీట్ చేస్తాడు, ప్రాతినిధ్యం వహిస్తాడు, ప్రకటనస్తాడు	జూరి చేస్తారు, నాయనీట్ చేస్తారు, ప్రాతినిధ్యం వహిస్తారు, ప్రకటనస్తారు.
III	172	no female representation of women in the figures of 'వ్యవసాయం శాఖ, న్యాయ శాఖ'	figures should be changed with women representation
	"	గవర్నర్ ఏసియోగిస్తాడు, నియమిస్తాడు, సంప్రదిస్తాడు, కొనసాగుతాడు	గవర్నర్ ఏసియోగిస్తారు, నియమిస్తారు, సంప్రదిస్తారు, కొనసాగుతారు.
	174	రాజకీయ పక్ష నాయకుడిని ముఖ్యమంత్రిగా నియమిస్తారు. రాష్ట్ర గవర్నర్ ఉత్తర్వుల ద్వారా ఏర్పాటు చేయాలి, ముఖ్యమంత్రి, సంప్రదించడం తాడు ముఖ్యమంత్రి రాష్ట్రపాలనలో (రుమాఖియల్) వహిస్తాడు	రాజకీయ పక్ష నాయకుడు/నాయకురాలిని ముఖ్యమంత్రిగా నియమిస్తారు. రాష్ట్ర గవర్నర్ ఉత్తర్వుల ద్వారా ఏర్పాటు చేయాలి. ముఖ్యమంత్రి, సంప్రదించడం తాడు ముఖ్యమంత్రి రాష్ట్రపాలనలో (రుమాఖియల్) వహిస్తారు.
	176	సభాపతి సభలో ఓటు వేయడు. కానీ నిర్ణయకల్ప ఓటు వేస్తాడు.	సభాపతి సభలో ఓటు వేయడు కానీ నిర్ణయకల్ప ఓటు వేస్తారు.
	177	In the Paragraph of 'ఉదాహరణ' రాష్ట్రపతి తొరికి నియమిస్తాడని కానీ.....	రాష్ట్రపతి తొరికి నియమిస్తాడని కానీ.
	179	In the Exercise, question of I-5, II-4, III-3 (నాయకుడని, వహిస్తాడని, వహిస్తాడు)	నాయకుడు/నాయకురాలు వహిస్తారని వహిస్తారు

Unit	Page No.	Observations	Suggested Alternatives
	185	In the last lines శాసనసభ సభ్యుడు అను శాసనసభ సభ్యుడుగా ప్రస్తుతాన్ని మండల పరిషత్ సభ్యుడుగా ఉంటాడు.	శాసన సభ సభ్యులు అను శాసన సభ సభ్యులుగా ప్రస్తుతాన్ని మండల పరిషత్ సభ్యులుగా ఉంటారు.
	186	In the Second Paragraph ప్రతి మండల పరిషత్తుకు ఒక డెప్యూట్టు ఒక ఉపాధ్యక్షుడు ఉంటారు. ఇంకా మూడు మండల ప్రజా పరిషత్తు డెప్యూట్టు ఒకరు ఒకరు ప్రత్యేకంగా ఎన్నుకోబడినారు.	ప్రతి మండల పరిషత్తుకు ఒక డెప్యూట్టు/డెప్యూట్టుల, ఒక ఉపాధ్యక్షుడు/ఉపాధ్యక్షులు ఉంటారు. ఇంకా మూడు మండల ప్రజా పరిషత్తు డెప్యూట్టు/డెప్యూట్టుల
		At last but one Paragraph, ప్రతి మండల పరిషత్తుకు ఒక మండల కేబినెట్ డిప్యూట్టి ఉంటారు. ఆ మండల యొక్క ముఖ్య కార్య నిర్వహణాధికారి మండల పరిషత్తు నిర్వహణను మేల పరచడం ఆలోచించి. ఆ మండల పరిషత్ ప్రస్తుత గ్రామ పంచాయతీల పనితీరును పర్యవేక్షిస్తారు. ఓట వేయకుండా మండల పరిషత్తు సమావేశాలకు ఇతరు యోజన కొరకు. మండలంలోని ప్రభుత్వ సిబ్బంది క్లెరిక్ ఆఫీసర్, పర్యవేక్షణలో పని చేస్తారు.	ఒకరు ప్రత్యేకంగా ఎన్నుకోబడతారు. ప్రతి మండల పరిషత్తుకు ఒక మండల కేబినెట్ డిప్యూట్టి ఉంటారు. ఆ కేబినెట్ యొక్క ముఖ్య కార్య నిర్వహణాధికారి. మండల పరిషత్తు నిర్వహణను మేల పరచడం ఆలోచించి. మండల పరిషత్ ప్రస్తుత గ్రామ పంచాయతీల పనితీరును పర్యవేక్షిస్తారు. ఓట వేయకుండా మండల పరిషత్తు సమావేశాలకు యోజన కొరకు, మండలంలోని ప్రభుత్వ సిబ్బంది తన ఆఫీసర్లలో పర్యవేక్షణలో పని చేయవడం మండల కేబినెట్ డిప్యూట్టి ఉంటారు.

Unit	Page No.	Observations	Suggested Alternatives
	187	In the third paragraph, ప్రతి జిల్లా పరిషత్తుకు గుర్ర ఛైర్మన్ గుర్ర ఛైర్మన్ ఉంటారు. గతంలో జిల్లా పరిషత్ ఛైర్మన్ గుర్రునే ప్రత్యేకంగా ఎన్నుకోబడేవాడు. In the last paragraph, ప్రతి కమిటీలో ఛైర్మన్ పదవిలోనూ సభ్యులనూ ఉంటారు.	ప్రతి జిల్లా పరిషత్తుకు గుర్ర ఛైర్మన్, గుర్ర ఛైర్మన్ ఉంటారు. గతంలో జిల్లా పరిషత్ ఛైర్మన్ గుర్రునే ప్రత్యేకంగా ఎన్నుకోబడేవాడు. ప్రతి కమిటీలో ఛైర్మన్ పదవిలోనూ సభ్యులనూ ఉంటారు.
	188	In the last paragraph ప్రతి మునిసిపల్ కౌన్సిల్లోనూ గుర్ర మేయర్ ఉండేలా ఉంటారు.	ప్రతి మునిసిపల్ కౌన్సిల్లోనూ గుర్ర మేయర్ ఉండేలా ఉంటారు.
	190	In the first paragraph ఛైర్మన్ గుర్రు చే ప్రత్యక్షంగా ఎన్నుకోబడతాడు. In the third Paragraph కార్యనిర్వహణాధికారి పురపాలక సంఘ పరిపాలనా వ్యవహారాలకు బాధ్యుడు.	ఛైర్మన్ గుర్రు చే ప్రత్యక్షంగా ఎన్నుకోబడతారు. కార్యనిర్వహణాధికారి పురపాలక సంఘ పరిపాలనా వ్యవహారాలకు బాధ్యుడు వహిస్తారు.
	193	In the fill in the blanks 5th, 9th fill ups ఎన్నుకోబడతాడు.	can be changed as ఎన్నుకోబడతారు.
	194	4th Multiple choice question ఎన్నుకోబడతాడు.	can be changed as ఎన్నుకోబడతారు.
V	195	రోడ్డు కూడల వద్ద రక్షకభటులు నిలబడి తన చేతి సైగలతో వాహనాల కదలకను నియంత్రించడాన్ని చేతితో చూపే గుర్తులు అంటారు.	రోడ్డు కూడల వద్ద స్త్రీ/పురుష రక్షక భటులు నిలబడి తమ చేతి సైగలతో వాహనాల కదలకను నియంత్రించడాన్ని 'చేతితో చూపే గుర్తులు' అంటారు.

	197	In the 5th paragraph అతడు, wrote. In the last paragraph 'కాపలాదారుడు' term use so many times	It can be changed as అతడు/ఆమె It can be changed as కాపలాదారులు
	198	In the students activities వాహనాల నియంత్రణ చేస్తున్న వ్యక్తిని అతడు చేసి చిహ్నాలను	Can be changed as అతడు/ఆమె
Part Unit No.	Page No.	Observations	Suggested Alternatives
Economics <u>IV</u>	212	ప్రజావస్తు సేవలను ప్రభుత్వము పౌరులకు అందిస్తుందేగాని విద్యుక్తి వాటికి యజమాని కాదు; తానొక్కడే లబ్ధిదారుడూ కాలేడు.	ప్రజావస్తు సేవలను ప్రభుత్వము పౌరులకు అందిస్తుందే గాని విద్యుక్తి గాని వాటికి యజమాని లేదా లబ్ధిదారు కాలేరు.
	214	In the first three paragraphs వ్యక్తి పన్నుకడతాడు used three times. In the last paragraphs వినియోగదారుడు వస్తువు ఇమ్మని అడుగుతాడు	can be changed as వ్యక్తులు పన్నులు కడతారు can be changed as వినియోగదారులు వస్తువు ఇమ్మని అడుగుతారు
		In the last line భరపతికి అవి పేదవాడికి అందుబాటులో లేకుండా పోతాయి	can be changed as అవి పేదవాడికి అందు బాటులో లేకుండా పోతాయి.
	218	In the central and state budget, ఆర్థిక మంత్రి బడ్జెట్ సమర్పించాక స్వీకృత చర్యకై కొంత సమయాన్ని కేటాయిస్తాడు.	can be changed as ఆర్థిక మంత్రి బడ్జెట్ సమర్పించాక స్వీకృత చర్యకై కొంత సమయాన్ని కేటాయిస్తారు.
	220	In the summary the word సమర్పిస్తాడు used	can be changed as సమర్పిస్తారు.

Unit	Page No.	Observation	Suggested Alternatives
	223	In the first para, masculine gender more.	<p>the paragraph can be changed as అమ్మకం వారులు, కొనుగోలు వారులకు కొన్ని వస్తువులతో పాటు బిల్లును కూడా తమ సంతకంతో పంపుతారు. కొనుగోలు వారులను ఒక నిర్ణాతమైన సమయంలో సొమ్ము పంపమని ఆ బిల్లులో కోరుతారు. కొనుగోలు వారులు దానికి అంగీకరించి నట్లుగా ఆ బిల్లుపై తమ సంతకం పెట్టి తిరిగి అమ్మకం వారులకు పంపి వస్తువులు తోసుకుంటారు నిర్ణాత సమయము లేకుండానే కొనుగోలు వారులు అమ్మకం వారులకు సొమ్ము పంపుతారు.</p>
		<p>14 persons were involved in writing the book, but only one is woman</p> <p>3 names appear under artists, unfortunately all are men.</p>	<p>women representation should be included in writing the book.</p> <p>”</p>

Subject: Social Studies

Class: X

Medium: Telugu

First published: 1998

New published 1999

Typing at Keerthan Graphics

Printed at Prajasakthi Daily Printing press, Vijayawada-2, Hyderabad.

Part Name Unit No	Page No.	Observations	Suggested alternatives
History			
I } II } III }	123-136 143-145 152-167	No information regarding status and conditions of women	Should get information and incorporate into the textbooks.
V	210-213	10 persons of famous persons of the world presented. But all were men	Women representation should be there.
VI	233	No women information in 'చరిత్రలో ప్రముఖులు'	
	236	No women writers names in 'ప్రముఖ రచయితలు, వారి రచనలు'	Should be incorporated

Part Name Unit No	Page No.	Observations	Suggested alternatives
Civics 1	250	No women information in National movement.	Should include the matter of women's status and role at National movement
	268	18 famous freedom strugglers information but among them only 2 were women	"
	271	No information of women at Independent India	"
	282	In the second paragraph <p>ఇచ్చింది పులం ప్రాతిపదికగా ఆ వ్యక్తి సామాజిక సామ, ఆత్మని ప్రజ్ఞ నిర్ణయంపై ఉండే.</p>	the word ఆత్మని should be deleted
	286	In 'National Integration' <p>ప్రతి వ్యక్తి విశాల సమాజం యొక్క సామర్థ్యం కోసం తీసినందు తోడ్పాటునందిస్తాడు.</p>	విశాల సమాజం యొక్క సామర్థ్యం కోసం తన మంతు కృషి చేయడం గిరుగుతుంది.
	290	In the fill in the blanks the 6 th one <p>భారతీయుడు తీసిన గీటు పాటుకును _____ నయను నుండి పొందుతాడు.</p>	భారతీయులు తీసిన గీటు పాటుకును _____ నయను నుండి పొందుతాడు.
Part Name Unit No	Page No.	Observations	Suggested alternatives
	292	In limited Govt concept <p>నిరంతర ప్రభుత్వ విధానంతో అధికార పార్టీ యొక్క నాయకుడు రాజ్యంపై సర్వాధికారం కలిగి సర్వాధికారం కలిగి సర్వాధికారం కలిగి ఉంటాడు.</p>	అధికార పార్టీ యొక్క నాయకుడు / నాయకులు రాజ్యంపై సర్వాధికారం కలిగి సర్వాధికారం కలిగి ఉంటాడు.
	294	(last para, last lines) <p>వివేకవంత ప్రాతిపదికపై ఏ వ్యక్తి కూడా గీటుర్ల జోబితాలని పేరు నమోదును ఉన్నట్లు కాదు</p>	వివేకవంత ప్రాతిపదికపై గీటుర్ల జోబితాలని పేరు నమోదును ఏ వ్యక్తికీ కూడా ఉన్నట్లు లేదు.

	295 } 297 }	In the figures of voting process no women representation	In the figures women representation should be given
	298	In the last paragraph ఆతిపెట్టడైన సమూహాలలో వ్యక్తి గుంటురిగా వుంటే ప్రభు సంతకాలపై ప్రత్యేక ప్రభావం కనబరచ వేడు. కాని తిలేదు మరి కొందరితో కూడుట వల్ల తిలే పని చెయ్యగలుగుతుంది	ఆతిపెట్టడైన సమూహాలలో వ్యక్తి గుంటురిగా కనబరచుకోవడానికి కలిసి ప్రభు సంతకాలపై ప్రత్యేక ప్రభావం కనబరచుటకు ప్రభావాన్ని చూపడం కరుగుతుంది
V	331	In the second paragraph వ్యక్తి గుంటురిగా జోడించవేడు	Can be converted as వ్యక్తి గుంటురిగా జోడించడం కుదరదు
VI	354	In the second line of the page చాటునం పడుపు వ్యక్తి (చాదకుడు)	Can be change as చాటునం/చాదకులు
Part Name Unit No	Page No.	Observations	Suggested alternatives
	i	14 members involved in writing the text book; 1 women + 13 men Artist is one person that too male	Women representation should be increased.

MATHEMATICS

Introduction

Equality among sexes is a fundamental right under the Constitution of India. In addition to making provisions for equal access to education to both boys and girls, it is necessary to remove all aspects of gender – discrimination and gender-bias in school curriculum. It has been a past observation that textbooks are gender biased. The NCF 2005 has paid special attention to this aspect. The workshop primarily identified 6 gender issues that need to be addressed : 1. Gender sensitivity, 2. Gender stereotyping, 3. Gender discrimination, 4. Gender equality, 5. Gender parity, 6. Gender justice.

School Mathematics is accorded a pivotal place in the school hierarchy of subjects but it is generally considered to be abstract. It is treated as a subject with lots of axioms and theorems, rules and methods which require a lot of skills and applications. Maths appears to be value free and an exact science which reflects reasoning and thinking but in reality it is also 'masculine dominated'.

In order to make school textbooks gender – inclusive and gender-sensitive a detailed textbook analysis of the A.P. High School textbooks (EM and TM) was undertaken. The following section presents a detailed description of each gender issue as reflected in NCF 2005 with suggestions and alternatives.

List of Mathematic^{ians} referred to in the textbooks

Class VIII

Sl. No.	Mathematicians	Page No.	Gender
1.	Heron	53	Male
2.	George Cantor	72	Male
3.	John Venn	85	Male
4.	Leonard Euler	85	Male
5.	Eratosthener	112	Male

6.	Euclid	219	Male
7.	Thales	219	Male
8.	Pythagoras	219	Male
9.	Plato	219	Male
10.	Bhaskaradu	220	Male
11.	Aryabhatta	220	Male
12.	Brahmagupta	220	Male
13.	Mahaveera Charyudu	220	Male
14.	Sridharacharyudu	220	Male
15.	Bhaskarudu II	220	Male
16.	Narayana Panditudu	220	Male
17.	Muneeswarudu	220	Male
18.	John Playfari	224	Male

Std. IX

Sl. No.	Mathematicians	Page No.	Gender
1.	Pythagoras	16	Male
2.	ArchimedeS	89	Male
3.	Aryabhatta	91	Male
4.	Varaha Mihira	91	Male
5.	Aryabhatta II	91	Male
6.	George Cantor	137	Male
7.	Rene Descartes	153	Male
8.	Arthur Caylay	184	Male
9.	Blaise Pascal	378	Male
10.	Gottfried Libnite	378	Male
11.	Charles Babbage	378	Male
12.	Alan Turing	378	Male
13.	John Von Newmann	378	Male

Std. X

Sl. No.	Mathematicians	Page No.	Gender
1.	Blaise Pascal	88	Male
2.	Cavalin	115	Male
3.	Isaac Barrow	115	Male
4.	Newton	115	Male
5.	Leibnitz	115	Male
6.	Taylor	115	Male
7.	Euler	115	Male
8.	Cauchy	115	Male
9.	Bernouli	115	Male
10.	Manjula	115	Female
11.	Bhaskaracharya	115	Male
12.	Archimedes	125	Male
13.	John Daintith	125	Male
14.	Nelson	125	Male
15.	Carl Fredrich	129	Male
16.	Thales	161	Male
17.	Rene Descartes	216	Male
18.	Hipparchus	234	Male
19.	Arthur Caylay	351	Male
20.	J J Sylvester	351	Male
21.	Jacobi	351	Male
22.	Cauchy	351	Male
23.	Heisenber	351	Male

Guidelines for writers of Mathematics Textbooks

1. Gender Blindness (Invisibility) needs to be avoided. In mathematics textbooks, there is reference/preference to masculine gender but a very limited reference to feminine gender. It is noticed that the problems very rarely refer to women and it appears that they are more existent. This trend needs to be altered.
2. Gender stereotyping needs to be avoided. The textbooks cast males as strong (physically), active and work oriented and in contrast portrays females as pretty, less active and saving oriented.
3. Language bias has to be paid special attention to the language used in Mathematics textbooks needs to be modified to make it gender fair. The textbooks specially in Telugu medium refer to the learner as 'he'. Pupils/ students are also referred to as 'he', workers are 'men'. This sort of 'masculine' bias needs to be avoided. The exclusive use of masculine terms and pronouns, ranging from our forefathers, mankind, and businessman, trade, labourers to the generic 'he', denies the full participation and recognition of women.
4. Inclusion of women mathematicians is recommended. The contribution of women mathematicians needs to be emphasised. It is sad that not a single woman mathematicians contribution has been mentioned in any of the three textbooks of A.P.Govt. publications. A serious effort needs to be made to identify and include the same.
5. Everyday applications with gender sensitivity has to be incorporated. The processes underlying everyday mathematics done by women within the home (like Rangoli) and outside (in the market place) needs to be included.
6. Care to be taken to avoid gender discrimination. In presenting real life applications, care should be taken to present issues without discrimination. For example, problems showing fathers being more capable than mothers or fathers doing work faster than mothers should be discarded.

Subject : Mathematics
 Class : VIII
 Medium : Telugu

Chapter/Unit	Page No.	Observation	Suggested Alternatives
Unit 2 వ్యవహార గణితం	p.21 Revision Exercise 1 Problem No.25	సమస్య లోని సంబంధ పథకము లోని ముగ్గురు ఆడవారు.	మరింత సంఖ్య మగవారిని చేర్చవచ్చు.
నిష్పత్తి/ అనుపాతం	p.22 Exercise 2 6 problems	1 st , 2 nd and 3 rd problems - gender free. 4 th problem - male names only. 5 th problem - cricketer only male names. 6 th problem - అవచయం - -Girls.	మొదటి సమస్యలో A, B కి బదులు స్త్రీ, పురుషులను సమానంగా చేర్చాలి.

Unit 2 శౌతుములు.	26 and 27 Exercise 8	1 st problem - పశువుల వ్యాపారం. 4 th problem - గోపంపు ఒక గూరినీ... 5 th , 6 th , 7 th , 9 th , 10 th problems - male representation.	ఈ సమస్యలను అడవారిని చెప్పవచ్చు.
బారు వట్టి	p.31	13 th problem : ... ఒకడు కొలవ నొమ్మను క్రమం.	సమస్యలను అడవారిని చెప్పాలి.
చక్ర వట్టి	p.35-36 Exercise 12	1 st problem : రామయ్య Example : యాదయ్య	ఇన్ని సమస్యలు ఒక స్త్రీని మాత్రమే చెప్పడం జరిగింది. స్త్రీ, పురుషులు సమాన నియంత్రణ ఉండాలి.
		2 nd problem : సేవయ్య	
		3 rd problem : చెమ్మ, జానక	
		4 th problem : ఒకడు	
		5 th problem : ఒకడు అప్పు తెచ్చి... అలసకె...	
		6 th problem : ఒకడు బ్యాంక్ లో... అలసకె...	
		7 th Problem : రామయ్య, గోపాలయ్య	
		8 th Problem : ఒకడు బ్యాంక్ లో... అలసకె...	
		9 th problem : ఒకడు అప్పు తెచ్చి... అప్పుడు అలసకె...	
భార వ్యాపారం	p.36-38	1 st problem : గోపాలయ్య పూపాలయ్య. Example : రామయ్య మరియు వారి.	ఇందులను కేవలం ఒక సమస్యలను అడవారిను చూపారు. అదే

		3 rd problem : రామడు, రఘుడు	అడవారిని కూడా వ్యాపారంలానే
		4 th problem : లాల్, వాలె.	చూపడం జరిగింది.
భాగస్వామ్యం	p.39	5 th problem : David, Gopi. 6 th Problem : అరుణ్, వరుణ్ Ex.3 Satyam, Sivam, Sundaram.	అడవారిని కూడా వ్యాపార సమస్యలో భాగస్వామ్యంగా చేర్చవచ్చు.
కాలము - పని	p.40-42 Exercise 14	1 st problem a,b,c,d, A's and B's. - Male representation e. రామడు, భోమడు	బక్క సమస్యలాగానే స్త్రీలను చేర్చడం జరిగింది.
		2 nd problem : Murali Srikant, Anil - male representation	అన్ని సమస్యల్లో సమాన స్థాయిలో స్త్రీలను చేర్చాలి.
		3 rd problem - P.Q. ఒక్కడు...	
		4 th problem - Ramya, శుభ	
		7 th problem - శంకర్, విశ్వనాథ్	
		8 th problem - యాదయ్య, వెంకన్న.	
		10 th problem - Amar, Akbar, Antony - male representation	
		12 th problem - A's and B's రామణి.	
		9 th Problem : షో లామ్ 8 సం॥ లలో చేసిపనేళ్లు 10 సం॥ లలో చేయగలవు... షో నాను కూడా కలిసి పని చేయడంలో...	

		13 th problem : 12 men and 8 women	ప్రతి పురుషుల మధ్య అసమానత
		14 th problem : 10 men and 15 women.	చూడరాదు.
Relative Speed	45	Example: A and B. Problem: 14 'P' Problem 15 : 'A' Male representation	ప్రతి పురుషులను సమాన స్థాయిలో చేద్దామని.

Subject : Mathematics
Class : IX
Medium : Telugu

Chapter/Unit	Page No.	Observation	Suggested Alternatives
Unit 4 Sets (సమీక్షలు).	Ex.2 p.142 (అభ్యాసం-2)	Problem 3 : ఒక అరగబడినది 50 మాది 'బాలబాల' - -	Reference to Boys → could be students. (బాలబాల → విద్యార్థులు)
Unit 7 : Matrices	Ex.2, p.201	Example 1 : Miss Anitha buys vegetables. – Gender stereotyping కుమారి అనిత కుంఠ- గారంటే కొన్నది.	Reference to girls to buy vegetables/ groceries could be gender neutral – Anitha – person. (అనిత → వ్యక్తి గా)
Unit 11 Computing	p.424, Example 4	In a game of cricket ,.....gender stereotyping. (క్రికెట్ అటాంట్ } Either girl / boy	Game of cricket need not always be represented by men/ boys. Girls also play cricket. (అమ్మాయిని చేర్చావచ్చు)

Subject : Mathematics
Class : VIII
Medium : English

Chapter/Unit	Page No.	Observation	Suggested Alternatives
Unit 2 Commercial Mathematics	p.20, Revision Exercise 1, Problem 25	The problem refers to saving scheme, whereas all the three names are women – Gender stereotyping.	Could you use the name of a man in addition ?

Ratio/ proportion	p.21, Exercise 2, 6 problems.	1 st , 2 nd and 3 rd problems – Gender neutral. 4 th problem – male names only. (Gender blindness.) 5 th problem – cricketers only – male names. 6 th problem – saving schemes – girls.	The first 3 need not be A and B. officer and clerk, selection candidates could name by giving equal weightage. Female cricketers and men savers could be incorporated.
Proportion	p.22-23 Exercise 5	Gender bias – unequal representation : 1 st problem – No. of men and work done. 2 nd problem – Men : work done 3 rd problem – Men : dig a ditch	Need not refer to men only for all jobs. Could add women or replace with persons.
Compound proportion	p.24 Exercise 6	Gender bias - blindness 2 nd problem – 10 men lay a road.. 3 rd problem – 24 men work.... 4 th problem – 175 men dig a canal	Should equally represent men and women in all jobs.
Profit and loss	p.25, exercise 8	1 st problem : An animal trader...his 4 th problem : Gopayya bought a house. (Only male references) 2 nd and 3 rd problem – gender neutral. Example : Trader – his.	Should give equal importance.
	p.26	5 th : A mechanichis 6 th : a trader.....his 7 th : a fruit merchanthis (Only male representation)	Please provide reference to women.
Compound interest	p.33-34 exercise 12	1 st problem : Ramayya borrowed..... Example : Yadayya..... 2 nd problem : Sitamma borrowed..... 3 rd problem : John borrowed from James. 7 th problem : Ramu borrowed from Gopal. 4 th , 5 th , 6 th , 8 th , 9 th 12 th – A	Equal representation

		borrowed. (Only one representation to women)	
Partnership	p.36-38 Exercise 13	1 st problem : Gopal and Bhupal – business Ex. Rani and Vani – vegetable business. 3 rd problem : Rama started and business and Rahim joined. 4 th problem : Lal started... Paul joined. Ex.2: Raju : Ravi :: Rita : Bala 5 th problem : David and Gopi. 6 th problem : Arun and Varun Ex.3. Satyam, Sivam, Sundaram 2,7,8 : A, B, C → Gender Insensitive.	There is marked reference for men and reference to women in one problem only. Women referred to in vegetable business only. Women and men can be shown to have business partnership also.
Time and work	p.39 to 41 Ex. 14	Problem 1 : a to d in terms of As and Bs 1 e – Ramu and Bheema Example 2 : A & B, B & C.....	
		2 nd problem : Murali, Srikanth and Anil.	
		4 th problem : Ramya and Shubha	Can give equal representation to women also.
		7 th problem : Sankar and Vishwanath.	
		8 th problem : Yadayya, Appadu and Venkanna.	
		10 th problem : Amar, Akbar and Anthony.	
		13 th problem : 12 men and 8 women.	
		14 th problem : 10 men and 15 women	Should avoid such disparity problems.
		9 th problem : Your mother can do a piece of work in 8 hours and you can do it alone in 12	Delete such problems which discriminate

		hours....your father joins....etc.	between mother's and father's capacities.
		12 th problem : A and Bjoined by a boy..	Avoid reference to children as indulging in work.
		3 rd and 12 th : P and Q A, B and C (Gender insensitive)	Can try to be gender sensitive.
Time and Distance	p.41-43 Exercise :15	Example 2 : A pupil walks from his househis house to school. 6 th problem : A train crosses a man. 2 nd and 3 rd : A person, I.	In all these problems, reference is either to a male/ person or impersonal/ inanimate A or B.
Relative Speed	p.43-44 Exercise 15	Example : A and B. Problems 11, 12, 15, A, B (Gender Blindness)	Care should be taken to include girls' names, women reference. Avoid being impersonal.

Subject : Mathematics

Class : X

Medium : English

Chapter/Unit	Page No.	Observation	Suggested Alternatives
Unit 4 : Linear Programming	Exercise 3, 103	1. A certain manufacturer has gender neutral. 2. A shop keeper sells.....him a maximum profit. (Masculine reference) 3. A sweet shop makes gift packets(Gender neutral).	Three problems – gender neutral or gender stereotyping. Can't women be manufacturers or shop keepers, etc.?
Unit 9 : Trigonometry	Example 1: p.262	Two boys are on opposite sides.....which the boys are separated.	Reference/ preference for women should be given.

Chapter/Unit	Page No.	Observation	Suggested Alternatives
Linear Programming	Exercise 3 p.106-107	Problem 1: A certain manufacturer ...find his? Problem 2 : A shopkeeperhim.....? Problem 6 : A furniture makershe? Problem 8 : A furniture dealerhe? Problem 9 : A manufacturerhis?	All these problems reflect gender stereotyping. Can't women be manufacturers? Ensure equal representation for men and women.
Trigonometry	p.272, 274, 275 Exercise 7	Example 1 : Two boys Problem 6 : A man	Reference can be made of women also.

Medium: Telugu

Chapter/Unit	Page No.	Observation	Suggested Alternatives
Unit 1	Page 1	శిశువు తెలివైన వాడు.	It can be gender free
3 Example 3 for Truth value of the given statements.		శిశువు తెలివైనది.	"
	Page 11	(vii) x కు కై ధిమంతు x నెలవ కలదు.	x కు కై ధిమంతు x నెలవ కలదు.
		(viii) ఆడడు శిశుగర్భవంతు క్రైతే ధివంతుడే.	శిశు శిశుగర్భవంతు క్రైతే ధివంతుడే.
		(ix) శిశువు వయస్సుపై బడిన వాడయితే తెలివైనవారి.	It can be modified with neutral gender
	Page 12 11p	శిశువు ప్రమించే వర్షికి	శిశువు ప్రమించే వర్షికి
	12p	శిశు రిందమైనది.	భిం కలది.

	13p	ఆమె తండ్రిమొదటి.	
	Page 26	10 B = {వైద్యులు తప్పకుండా తండ్రిలుగా గల విద్యార్థులు.	B = వైద్యులు తప్పకుండా గల విద్యార్థులు.
	Page 36		It should be mentioned by name of an individual instead of 'అది'
	13(i)	ఆమె తండ్రిమొదటి.	"
	(iii)	ఆమె తండ్రిమొదటి కానీ సోదరి సోదరి కాదు.	"
	(iv)	ఆమె తండ్రిమొదటి తన సోదరి సోదరి కాదు.	"
	(xi)	ఆమె సోదరిమొదటి తన తండ్రి తండ్రి కాదు.	"
	(xii)	ఆమె తండ్రిగా తన సోదరి సోదరిమొదటి కాదు.	"
	10 (viii)	... రోజులు భవనములలో ఆలోచించుచు నుండు. ... రోజులు ఆలోచించుచు భవనములు కాదు. ... రోజులు ... కాదు.	It should be mentioned by name of an individual instead of 'అది'
	Page 83 Problem 3	ఇచ్చిన సమస్యలు 48 కంటే వరుసగా ... మొదటి కంటే రోజు మొదటి నడక వెళ్ళు కనుగొనుము.	... క.పి. నలువ కంటే ... మొదటి కంటే
	Problem 14	... రోజులు తన తండ్రి కాదు ... రోజులు వెళ్ళు రోజులు తన తండ్రి కాదు ... వెళ్ళు వెళ్ళు
	Problem 15	... నీ తండ్రి రోజులు వెళ్ళు మొదటి	... నీ తండ్రి వెళ్ళు వెళ్ళు మొదటి?
Unit IV	Page 127 Exercise 3		
	Problem 2	... తండ్రి వెళ్ళు వెళ్ళు మొదటి	... తండ్రి వెళ్ళు వెళ్ళు మొదటి

	Problem 6	... వాస్తవాల ... కాయలు చెప్పారు.	... వాస్తవాల కాయలు చెప్పారు ... చెప్పకపోయారు.
Unit V వాస్తవాల సంఖ్యలు	Page 144	Mathematicians: Cavalier 1635 AD Issac Barrow 1669 AD, Newton 1642-1727, Leibnitz 1646- 1716, Taylor, Bernouli, Meclarian, Yuler Indian Names : Manjula (932 AD) Bhaskaracharya (1150 AD)	No woman name in general and Indian woman in particular. The names from NCERT's book on women scientists and mathematicians may be included related to the area of learning.
Unit VI	Page 163 (Progressions) Example 10	ఒక వృద్ధి మరియు తగ్గుదల వద్ద శు. 12000 ... 10000 ... 6000 చెల్లించారు ... తగ్గుదల వచ్చింది. ... ఆరంభం లభించారు.	Names may be included one from male and one from female.
	Page 176 Problem 14	ఒకడు తన స్నేహితుల నలక తన పట్టు వాళ్ళు రావు ...	Gender bias. The names may be introduced.
Unit IX	Example 3 Page 321	ఒక వృద్ధి తన నలక గమనించారు.	Names may please be introduced.
	Page 322-323 Exercise 7 సంక్షిప్త సమాధానం శు. 10	ఒక సంవత్సరం నెలవట్టుతుంది...	
Unit XI Matrices	Page 362 Exercise 2 Problem 10	ఒకడు తన తల్లికి కనుగొనడం	
Unit XII	Page 381 Example 4	గౌరవం ఒక రెడ్యూషన్ 500 రు.కి ... లాభం? పట్టుకు సంవత్సరం.	The gender reference is boy.

PHYSICAL SCIENCES

Introduction

Though the women constitute 58% of the population but not represented in textbooks, the International Conferences and Human Rights are emphasizing the three aspects – Education, Equality and Development. The Article 15 of Indian Constitution also is insisting on the equality of sexes in all respects. Even National Policy on Education 1986 stressed the importance of removal of sex bias in all educational endeavours and need to empower women and enhance the self confidence among girls and women. The National Curriculum Framework 2005 paid special focus to remove gender discrimination in education – its curriculum – activities – curricular transaction – extra curricular activities and so on. They have identified 6 areas in this field namely, 1. gender sensitivity, 2. Gender Steoreotyping, 3. gender discrimination, 4. gender equality, 5. gender parity and 6. gender justice.

The subject of physical sciences plays an important role in providing the basic fundamentals of the subject like Universality, Experimentation, Cause-effect relationship, observation, objectivity and so on. From this point of view, the analysis of the textbooks – which acts as guides to the teacher for all transactional purposes was carried out and necessary guidelines are provided herewith. The information or the subject knowledge provided in these textbooks should be free from any bias and provide the basis for inculcation of right attitudes among the children. Only with this introduction the subject of physical sciences was included as one of the school subjects particularly at secondary level. More over the adolescent children should inculcate that all are equal in all

respects. Only with this intention, the Physical sciences textbooks of classes VIII, IX and X of A.P. State both Telugu Medium and English Medium were analysed and the guidelines are suggested to the text book writers. Though the subject of science looks to be value fair and an exact science which includes reasoning, logic and thinking, but in practice it is not like that. This subject is also 'male dominated' if it is critically analysed. A detailed description of analysis is presented in the following pages with a few suggestions and alternative version for the actual working/ language used in these physical Sciences textbooks, the examples given and pictorial representation of the ideas as shown in these textbooks. The analysis done includes how the male and female characters are depicted and how these things can be modified from gender inclusive perspective and to remove gender stereotyping as per the change that are being taken in our environment and society as such. Even the students should be aware of all the changes around them and these textbooks should transmit and act as real models in formulating the right concepts among the learners.

Subject : Physical Science
 Class : VIII
 Medium : Telugu

Unit No.	Page No.	Observation	Suggested Alternatives
2 కొలతలు	11	దర్శ బట్టల కుట్టడానికి టోపు కొలతలు తోసుకోవటం	దర్శ అనేవారు నైలను కూడా చూపవచ్చు
3 పర్ణ గణక శాస్త్రము	28	నొన్నెవేతుడు.....? నొన్నెవేతుడు ఇంటికి చేరుకొగలడా? -- మూస Male representation చొదకుడు ఓడను నడుపువాడు.....?	దర్శ బట్టలు కుట్టానప్పుడు పేపులో కొలతలు వస్తుకొవ్వడం జరుగుతుంది. నైలను చూపవచ్చును
3 పర్ణ-తీకనాడు	37	IV : Problem ఒకడు పరుగు పందెం..... అతని వడిని - - - -	
5 గురుత్వ కేంద్రం	57	5:3:1: తొడుపై నడిచే వృత్తి అతని చేతిలో..... etc,	దీనిని మహిళలతో చూపవచ్చును.
6 అంబు ఇంజనం	65	6.2.2: నొటిలో మునిగిన వృత్తి, అతని ఇరిరంపై..... etc,	
Unit 9	95	గంజీలు ధ్వని తరంగాలు Male ప్రసారం.	
Unit 10	100	చొక్కలి గదిలో వస్తువులపై కంటి పడినపుడు కనిపించుట Male	
Unit 10	105	సముద్ర తర్జున వలన విచ్చుట ప్రతిచేయం - Male Male - పెరినోప.	
	106	పెరినోప - Male, ఎలాగో లయర్లు వలన తర్జునాల వలన Male ప్రతిచేయం విచ్చుట - Male	
Unit 13	147	పెరినోప - Female	
	148	పెరినోప - Male and Female (గ్రంథుకం)	
	148	సిస్టంల వేధానం - Female పెరినోప (గ్రంథుకం)	
	149	అరివి బ్రాడ్ కంట్రింగ్ మరియు Female - (గ్రంథుకం)	
	150	యాంత్రిక రికార్డింగ్ మరియు పనరులు - female, లయస్కంపె రికార్డింగ్ మరియు ప్రసారం female బేపు రికార్డింగ్ - female	

గతి శాస్త్రం		<p>1. Question : లాంగ్‌జంప్ చేయవచ్చికి పరిగట్టాడు</p> <p>(1) అతడు తన గరిశక్తిని.....</p> <p>(2) అతడు తన కండలకు.....</p> <p>(3) అతడు ఎక్కావ.....</p> <p>(4) అతడు తన పరుగెత్తి.....</p>	<p>2 ప్రశ్నలలో సమాన నిష్పత్తిలో స్త్రీ పురుషులను చేర్చాలి లేక ఒక</p>
		<p>2 Question : వక్రమార్గం లో కదులు- తున్న బస్సులో..... వచ్చి... ఎలాడు</p> <p>(1) అతని శరీరానికి దిశా బదలత్వం కలదు</p> <p>(2) అతని సరిగ.....</p> <p>(3) అతనికి ఆల.....</p> <p>(4) అతని నిలు.....</p>	<p>ఉదాహరణ పురుషులను చేర్చి మరొక ఉదాహరణలో స్త్రీలను చేర్చవచ్చును.</p>
7 ఉదాహరణ	81	<p>Ex: ఒక రోగి అతని ఉష్ణోగ్రత ఎంత?</p>	<p>రోగి స్త్రీ/పురుషులలో ఎవరి- శైన చేర్చవచ్చు. లేక వ్యాక్సి అనుపదమును స- యోగించవచ్చు.</p>
8 తరుణులు	91	<p>8.1.3: Example: పొడవైన క్యూలో...? ఆ క్యూలో A తన.... (తొననాడను కొనుము. అప్పుడు B తన ముందున్న వ్యాక్సి Cని అతడు..... తొస్తాడు</p>	<p>బహుమతనము. నుపయోగించవచ్చు.</p>
9 ధ్వని	96	<p>9.1.2: ఇద్దరు ఈతగాళ్లు..... నోలో ఒకడు..... రెండవవాడు చాలా. శబ్దాన్ని విసగలడు</p>	<p>ఇద్దరు వ్యక్తులు ఈత కొట్టినపుడు మొదటి వ్యాక్సి..... రెండవ వ్యక్తిగా మార్చవచ్చును</p>
9 ధ్వని	96	<p>9.2.1: మంచి సంగీత విద్వాంసుడు</p>	<p>సంగీత విద్వాంసుడు → సంగీత విద్వాంసులుగా మార్చవచ్చును.</p>

Subject : Physical Science
 Class : VIII
 Medium : English

Unit No.	Page No.	Observation	Suggested Alternatives
Unit 3 Kinematics	25	3.1.2: Can your? No, he can't	Friend may be female/ male.
Unit 3 Kinematics	33	IV : Solve the problems : a) An athlete runs Calculate his speed.	A few of these examples may be of female also.
Unit 5 Centre of Gravity and Stability of bodies.	47	Introduction : Person walking on a rope is male	
Unit 6 Fluid Pressure	58	6.2.2: A person immersed in waterfrom on his body.	
Unit 6 Fluid Pressure	61	6.3.1: If a person is in spaceThat is why he	
Unit 7 Heat	77	IV. Solve the problems : 1. The temperature Calculate his temperature?	No need of mentioning patient as male it may be represented as neutral.
Unit 8 Waves	80	8.1.3: A Person in a queuethe person B in front of him.	One may be of male and the other may be of female example.
Unit 9 Sound	84	Transmission of sound in air – Male.	
Unit 10 Light	88	Visibility of objects in a dark room when light falls on them – Male.	
	93	Position of image on a plane mirror – Male	
	93	Periscope formation of image – Male	
	94	Formation of multiple images on inclined mirrors – male	

Unit 12 Electricity	119	12.2.3: A person swimming....with his hands.	
B. Modern World Instruments	129	Telephone – Female	
	130	Telephone and Receiver cables – Female and Male.	
	130	Wireless and Radio Broadcasting – Female	
	131	T.V.Broadcasting and Receiving – Male	

Subject : Physical Science

Class : IX

Medium : Telugu

Unit No.	Page No.	Observation	Suggested Alternatives
Unit 4 గతిశాస్త్రం	54	Ex 7 : 60 Kg బరువున్న మనిషి 15 m i) అతను చేసిన పని ఎంత? ii) అతని స్థితిశక్తి ఎంతపరిగింది?	'అతను' 'అతని' అను పదాలను భరిగిన పని ఎంత? ఎంత స్థితిశక్తి పరిగింది గా మార్చవచ్చు.
Unit 5 సరళయంత్ర భౌతికం	62	Female representation : బలయంత్రానికి ఉదాహరణలు: గృహాలు పెరుగును చిలుకుడుకు	గృహాలుకు → neutral Ex: పెరుగును చిలుకుడుకు 'గృహాలు' అనే మాటను ఉదాహరించిన ఉదాహరణలు
Chemistry Unit 1	149	In Example A, సైకిల్‌పై వెళ్ళి వృత్తి సునాయనంగా వేళలాడు In Ex: C, సైకిల్‌పై వెళ్ళి వృత్తి వెళ్ళారు..... అని తెలుసు కోవడానికి వించేస్తాడు?.....	'ఇ' ఉదాహరణలు మాగవారిని సూచిస్తాయి ఇక ఉదాహరణలు క్రిలను చేర్చవచ్చు 'లేక' వృత్తి 'అనుపమ- మార్గ' మార్చవచ్చును
Unit 2	19	స్ప్రింగ్ త్రాసు Boy	
Unit 3	182	రియానిక బంధం 4 Boys	
	188	సంయోజనీయ బంధం 2 Boys	

Subject : Physical Science

Class : IX

Medium : English

Unit No.	Page No.	Observation	Suggested Alternatives
Unit 2 Measurement	17	Spring balance – Boy	
Unit 3	162	2 pairs of Boys in Ionic bond.	
Unit 5 Simple machines and moments	56	A housewife appliesof the churner.	It may be represented as neutral not mentioning particular gender like ' while churning '. There is no need to use the word 'housewife'.
Unit 1 Behaviour of Gases	132	Ex: A. When a personhis required direction.	When a person travels against the wind on a bicycle, it is necessary to peddle hard to move in the required direction. If the person travelling in the direction of wind flow, moves forward without much effort.
Unit 1: Behaviour of Gases	132	When a person travels against the wind on a bicycle, he has to peddle hard to move in his required direction. If he travels in the direction of the wind flow he moves forward without much effort.	
Unit 4 Dynamics	47-48	Problems : Ex 1: What is the work done by a man 30 kgs over his head when he..... etc.	Male representation is not necessary. Can be represented as a person instead of a man.
		Ex 7 : A man of 60 kgs. Walks upto the top of a building. i) How many joules of work has he done ? ii) What is the increase in his potential energy ?	Male representation is not necessary. Can be represented as a person instead of a man.

Subject : Physical Science
 Class : X
 Medium : Telugu

Unit No.	Page No.	Observation	Suggested Alternatives
Unit 2 మన దీర్ఘ-కురు-త్వకర-త	17	Ex 2:50 కి గ్రాల ద్రవరాశి కలిగిన ఒక ద్రవ మరియ 12 కి.గ్రా ద్రవరాశి ----- ఆమె చెట్ట ----- etc,	ద్రవ లో గా చూపించారు దొరికిన మార్పును అనేక-తులనా చూపించవచ్చు లేదా మధ్యస్థంగా చూపించవచ్చు. ఉదా. యజమాని-సంపుట బంతున
Unit 4 గతి శాస్త్రం	32	4.1.6: పరిశీలకుడు - 5 సార్లు ఉదాహరణలో 'పరిశీలకుడు' అన్న పదాన్ని 5 సార్లు వారడం బరిగింది.	దొరికిన పరిశీలకుడుగా మార్పువచ్చు (లేక) పరిశీలనలో (లేక) దొరికిన పరిశీలన వస్తుడు అనుపదాలతో మార్పువచ్చును.
Unit 4	32	గ్రహణం చేస్తున్న పెరుల్బుయిన చంద్రములాగాని ఆం	Bny
11.5	266	రిజియో స్విరుమంగా ఘోక్తానూలాగా ధ్వని సృష్టించి ఉత్పత్తి చేయడం - Male	Male
	268	కిమిలు తురప్త ద్రవీయం - Male	Male
Unit 4	38	తొలి క్షితిజ సమాంతర పాసి పెంచడం వలన - (వర్ణం)	Boy
Unit 10	406	గ్రాస్ బ్లూ లింగ్.	Male

Subject : Physical Science

Class : X

Medium : English

Unit No.	Page No.	Observation	Suggested Alternatives
Unit 4 Dynamics	28	4.1.6: Observer sitting on the rotating platform is followed by him .	Among the two one example may be of woman.
Unit 4 Dynamics	30	4.1.6: A man sitting in a car.	
Unit 6 Sound	55	In example of resonance phenomenon, 4 th example :Mother and child	Woman is depicted as mother, which is stereotypic model.
Unit 4 Dynamics	28	Wide rotating platform – Boy	
	34	Effect of increasing initial horizontal speed – boy	
11.5 Radio and Television Basic Principles of working	228	Production of sound messages by a microphone in a radio station – Male	
	239	Scanning of Image of the screen of a camera - male	
Unit 10 Chemistry and Industry	341	Glass Blower - Male	

List of Scientists referred to in the textbooks.

Sl. No.	Names of the Scientists	Class	Page Numbers		Gender
			English	Telugu	
1.	Halley	VIII	7	8	Male
2.	Paul Vernier	VIII	13	14	Male
3.	Issac Newton	VIII	34	38	Male
4.	Pascal	VIII	56	63	Male
5.	Archimedes	VIII	58	65	Male
6.	Robert Boyle	VIII	63	71	Male
7.	Celsius	VIII	69	79	Male
8.	Six	VIII	73	82	Male
9.	Huygens	VIII	89	101	Male
10.	Thales	VIII	113	129	Male
11.	Gilbert	VIII	113	129	Male
12.	Benjamin	VIII	113	129	Male
13.	Volta	VIII	114	130	Male
14.	George Laclanche	VIII	114	130	Male
15.	Oersted	VIII	118	134	Male

16.	Thomas Alva Edison	VIII	124	142	Male
17.	J.J.Thomson	VIII	129	147	Male
18.	Graham Bell	VIII	129	147	Male
19.	Marconi	VIII	130	148	Male
20.	James Clerk Maxwell	VIII	130	148	Male
21.	J.L.Baird	VIII	131	149	Male
22.	Cavendish	VIII	166	187	Male
23.	K.W.Scheele	VIII	175	197	Male
24.	Priestley	VIII	175	197	Male
25.	Leavoiser	VIII	175	197	Male
26.	Bergius	VIII	173	195	Male
27.	Frasch	VIII	184	207	Male
28.	Darwin	IX	6	6	Male
29.	Vernier	IX	9	10	Male
30.	James Prescott Joule	IX	35	38	Male
31.	James Watt	IX	37	40	Male
32.	Laplace	IX	94	105	Male
33.	Newton	IX	94	105	Male
34.	Young	IX	94	105	Male
35.	Roentgen	IX	126	142	Male
36.	Robert boyle	IX	135	152	Male
37.	Jacques Charles	IX	138	154	Male
38.	Thomas Graham	IX	144	160	Male
39.	William Crooks	IX	148	165	Male
40.	Maharshi Kanada	IX	148	164	Male
41.	John Dalton	IX	148	164	Male
42.	Gaylussac	IX	182	208	Male
43.	Berzelius	IX	182	208	Male
44.	Avogadro	IX	182	208	Male
45.	G.N.Lewis	IX	159	179	Male
46.	Madam Curie	IX	152	170	Female
	Democritus	IX	148	164	Female
47.	Copernicus (Monk)	X	8	8	Male
48.	Ptolemy	X	8	8	Male
49.	Tycho Brahe	X	8	8	Male
50.	Johannes Kepler	X	8	8	Male
51.	Issac Newton	X	8	9	Male
52.	Galileo	X	10	10	Male
53.	Robert Hooke	X	12	14	Male
54.	Christian Huygens	X	66	73	Male
55.	Thomas Young	8	69	76	Male
56.	Fresnel	8	69	76	Male
57.	Dr.Charles	X	85	93	Male
58.	Weber	X	95	105	Male
59.	Ewing	X	95	105	Male

60.	Coulomb	X	97	108	Male
61.	G.S.Ohm	X	124	141	Male
62.	Joule	X	142	162	Male
63.	Michael Faraday	X	153	176	Male
64.	Maxwell	X	160	184	Male
65.	Oersteds	X	160	184	Male
66.	Fleming	X	164	186	Male
67.	Lenz	X	170	195	Male
68.	Thompson	X	182	228	Male
69.	Leonard	X	182	228	Male
70.	Rutherford	X	182	228	Male
71.	Bohr	X	184	209	Male
72.	Einstein	X	188	215	Male
73.	A.H.Becquerel	X	190	219	Male
74.	Chadwick	X	202	213	Male
75.	Irene Curie Joliot	X	203	235	Female
76.	M.Frederic Joliot	X	203	235	Male
77.	Cockroft and Walton	X	203	235	Male
78.	Otto Hahn	X	204	237	Male
79.	Lise Meitner	X	204	237	Male
80.	Fritz Strassman	X	204	237	Male
81.	J.Bardeen	X	224	260	Male
82.	W.H.Brattain	X	224	260	Male
83.	William Shockley	X	224	260	Male
84.	Marconi	X	227	264	Male
85.	Max Planck	X	241	282	Male
86.	Sommerfield	X	242	284	Male
87.	Louis de Broglie	X	244	284	Male
88.	Uhlenbeck	X	247	288	Male
89.	Goudsmit	X	247	288	Male
90.	Moeller	X	249	292	Male
91.	Aufban	X	250	293	Male
92.	Hunds	X	250	293	Male
93.	Paulis	X	250	293	Male
94.	Dobereiner	X	268	315	Male
95.	John A.R. Newlands	X	269	316	Male
96.	Mendeleef	X	269	316	Male
97.	Lothar Meyer	X	269	316	Male
98.	Nilson	X	270	317	Male
99.	Deboisbaudran	X	270	317	Male
100.	Linus Pauling	X	275	321	Male
101.	Arrhenius	X	302	356	Male
102.	Sorensen	X	307	360	Male
103.	J.Aspin	X	338	403	Male
104.	William Henry Perkin	X	346	411	Male

Subject : Physical Sciences

Class: VIII

Authors (English and Telugu Medium)

Sl. No.	Name of the Author
1.	Dr.Narayana Prasada Rao – Male
2.	Dr.K.Venkaeswaralu – Male
3.	Dr.M.Vittal – Male
4.	Mr.N.Upender Reddy – Male

Sl. No.	Name of the Editor
1.	Acharya Sarabu Ramanamurthy – Male
2.	Acharya R. Jaganathan – Male

Sl. No.	Chief Editors
1.	Acharya G.Sivarama Sastry – Male
2.	Acharya P.S. Rao – Male

Artist
1. D.S.Vinod Kumar – Male

Subject : Physical Sciences

Class: IX

Authors (English and Telugu Medium)

Sl. No.	Name of the Author
1.	Dr D Shridhar – Male
2.	Sri K Ramakoteswara Rao – Male
3.	Prof K C Rajanna – Male
4.	Dr.Y.Rajeshwar Rao – Male

Sl. No.	Name of the Editor
1.	Prof L.Rama Murthy – Male
2.	Prof.P.K.Sai Prakash – Male

Sl. No.	Chief Editors
1.	Prof G.Sivarama Sastry – Male
2.	Prof P Srinivasa Rao – Male

Artist
Sri S Venkataphani – Male

Subject : Physical Sciences

Class: X

Authors (English and Telugu Medium)

Sl. No.	Name of the Author
1.	Dr B Appa Rao – Male
2.	Dr.G.Bhikshamaiah – Male
3.	Dr.M.Vittal – Male
4.	Dr.G.Venkateswarlu - Male

Sl. No.	Editors
1.	Dr.Mudigonda Salagram – Male
2.	Dr.R.Jagannathan – Male

Sl. No.	Chief Editors
1.	Prof.G.Sivarama Sastry – Male
2.	Prof.P.Sivarama Rao – Male

Sl. No.	Artist
	S.Venkata Phani – Male

Class	Authors			Chief Editor/ Editors		
	Male	Female	Total	Male	Female	Total
VIII	4	-	4	4	-	4
IX	4	-	4	4	-	4
X	5	-	5	4	-	4
Total	13	--	13	12	--	12

Suggestion : To include female authors, chief editor/ editors.

Picture Representation

Class	Male	Female	Total
VIII	7	5	12
IX	7	--	7
X	5	--	5
Total	19	5	24

Character representation

Class	Male	Female	Total
VIII	37	--	37
IX	16	1	17
X	66	3	69
Total	119	4	123

Cover Page – Pictures

Class	Male	Female	Total
VIII	2	-	2
IX	1	3	4
X	1	-	1
Total	4	3	7

Guidelines to the writers of Physical Science Textbooks

1. Gender Blindness (Invisibility) should be avoided.

The textual matter of physical science textbooks contains more masculine references but not feminine. It is observed that whenever there is explanation or an example for a particular concept, in most of the places, male references was given and not even 5% of the instances are of females which indicate that women constitute very less. Thus, this aspect is ignored. This tendency should be changed wherever it is possible.

2. Gender stereotyping should be avoided.

The woman was shown as mother-child, housewife which are traditional roles. Moreover there is no need to mention the women in those examples. This may be taken care of.

3. **The language bias has to be changed** : since in the Physical Science textbooks to be modified by including female writers (authors) and Editors. In all these textbooks all the authors, editors and the artists are male people. A few female authors should be involved at the time of textbook writing. Even the language used both in Telugu versions including the preface – for teacher, learner are male oriented. This needs modification. The textual matter refers to 'he' in most of the places.

4. **Inclusion of women scientists along with their contribution is recommended.** Only one women scientist is included as if there are no contribution of female folk o the field of physical sciences. Women technologists like Empress Shi Dun, Nor Mahal,

Helen Girliner, Franklin Maria Michell, Vanitha Rangarajan, etc. may be included in any one of the three textbooks of Physical Sciences published by the Government of Andhra Pradesh. This aspect needs sincere effort.

5. Care to be taken to avoid discrimination in Character

In portraying male and female characters, women are always depicted in low status positions and men are in high and prestigious positions like King, Pilot, Astronomer, scientist, physician, etc. whereas women were shown as housewife, churner, etc. This may be avoided.

6. The Pictorial representation is unequal. There are more number of pictures of male/ boys whereas very few are of female/girls. This may be eliminated by including some more female pictures and removing male pictures wherever appropriate.

BIOLOGICAL SCIENCES

Introduction

Biological Science is one of the subjects in the curriculum. It draws its content from Botany, Zoology and Human Physiology. It intends to enable students to develop scientific temper, keen observation, logical reasoning and valid inference along with critical understanding of technical terms. The technical terms in sciences are difficult by themselves. The impact of Sanskritisation while writing textbooks in Telugu made the tough technical concepts further complicated. Ex :

Hence the easy, equivalent terminology is to be given in the text either within the brackets immediately after the word or at the end of the textbook which enables even a "hard to reach" students to understand them and arrive at exact acquisition of knowledge.

Biological sciences possess a responsibility of creating zeal and enthusiasm in students besides the inquisitiveness, in sustaining the scientific thought and in inculcating in students a critical, moral and mental energy to make them alert to know the scientific principles and laws of nature without hindering to the value system.

In the following pages, an attempt has been made to analyse the present textbooks of VIII, IX and X classes of both English medium and Telugu medium of Andhra Pradesh keeping in mind the gender issues as envisaged in National Curriculum Framework 2005.

The naked truth about low literacy among women during 15th to 18th centuries which acts as a hindering block to allow women scientists to emerge in various fields of science like physics, chemistry, botany, zoology and human physiology has to be accepted.

But the sterling efforts of women scientists during 19th and 20th century in various fields of science need to be specifically mentioned atleast in new attempts of textbook writing by the group of authors.

The observations and suggested alternatives are listed out in a tabular form along with the unit no, page no, para and line number of all the textbooks. These suggestions may help in improving the textbooks by modifying the ways of presenting the gender issues.

Based on the analysis of biological science textbooks and the focus group report on gender issues – some guidelines have been drawn for strengthening the thought and deed of the textbook writers in successfully dealing the gender issues.

Guidelines on Gender Issues

The textbook writers of biological sciences are requested to consider the following guidelines keeping the gender issues as envisaged in NCF 2005.

Avoid gender discrimination

Gender discrimination is obviously seen throughout the books. For example, along with portraits, life sketches and contributions of men scientists, the available contribution of women scientists are to be mentioned.

Avoid usage of masculine form of the word and use neutral terms of it applies to both the genders.

Ex: 25 సం॥ల పురుషునిలో నిమజ్జానికి శాపేక్షియ ఎనిమిది పరిశ్రమలు జరుగును.

It has to be corrected as

25 సం॥ లలో యానవ్రానిలో నిమజ్జానికి

Instead of In a man aged about 25 years

In a person aged about 25 years will be good. The often used word "He" can be reflected by "She" or "person". Instead of man, the word "person" or "human being" can be used.

Gender equality has to be observed while drawing the pictures wherever possible and necessary, show both the genders and give equal treatment.

Provide gender justice.

Though men and women take equal responsibility in constructive and destructive activities, they were tagged to men but not to women.

Ex:- 1. - జంటలు సంతతిని నూతనం చేస్తున్నారు, యికశిలనరికి ద్రుక్కుతే సమతుల్యతకు భంగం కలిగిస్తుంది (destructive)
 2. విజ్ఞాన శాస్త్రరంగాల్లో విశిష్ట కృషి చేస్తున్నారు. నూతన ఆవిష్కరణలను వెలికించే చిరుట్టెను (positive & Constructive)

Subject : Biology

Class : VIII

Medium : Telugu (2003 edition)

As the photograph of Sri Swaminathan was given inside the textbook, the photograph of him need not be printed on the cover page. Along with a man in agricultural fields, the figure of a woman also can be kept. Picture of woman scientist especially in the field of medicine, agriculture and others can be printed.

Out of four authors, only one is woman. Instead 2 men and 2 women authors can be included. సంపాదక వర్గంలో గెందూ పురుషులి ఉన్నారు. కనీసం ఒకరైనా స్త్రీ సంపాదక వర్గంలో ఉంటే బావుంది ఉంటేది.

Unit No.	Page No.	Observation	Suggested Alternative
1.1	1	మానవుడు ఈ శాస్త్రానిధి క్రెడ్యుయన్-నం చేస్తున్నానని ఉన్నాడు. ఎంతో ఉత్సాహం చూపిస్తూ వచ్చాడు.	మానవులు ఈ శాస్త్రానిధి క్రెడ్యుయన్-యనం చేస్తున్నాడు. ఎంతో ఉత్సాహం చూపిచారు.
	2	శ్రద్ధ కనబరుస్తూ వచ్చాడు.	శ్రద్ధ కనపరి చారు

1.2	15-25	జీవశాస్త్రంలో విశిష్ట కృషి చేసిన శాస్త్రవేత్తల చిత్రపటాలు, యారి యరికీ ధన వివరాలు ఇచ్చారు.	కనీసం ఒకరిద్దరు స్త్రీ శాస్త్రవేత్తల యారి విశిష్ట కృషి చిత్రి ఆవశ్యకత ఉంది.
1.6	47	సకల శిరుకాల చిత్ర పటాలలో బాలడు బొమ్మ మాత్రమే ఉంది.	బాలిక చిత్రపటం కూడా ఉండి ఉంటే బావుంటుంది.
3.1.1.	128	ఆదిమానవుడు దేశ దిమ్మరిగా (స్థిర నియం సం లిక) అనుమనుగడ సాగించి యారు. ఆరుగుఱు ఉండి యారు. డేవి యొల్టాని గమనిస్తూ ఉండి యారు.	ఆదిమానవులు దేశ దిమ్మరిగా సుంబరిస్తూ అనుమనుగడ సాగించి యారు. ఆరుగుఱు ఉండి యారు. డేవి యొల్టాని గమనిస్తూ ఉండి యారు.
3.4	160	మానవుడు చేన్న జంతువులను మచ్చిక చేసుకునూడు	మానవులు చేన్న జంతువులను మచ్చిక చేసుకునూరు
5.1	240	పప పనులు రైలు నిర్వహిస్తూ ఉండి అటనుకొనండి	పప పనులు రైలు నిర్వహిస్తూ ఉండి అటనుకొనండి.

Subject : Biology

Class : VIII

Medium : English

Cover page – the picture of Dr.M.S.Swaminathan is printed. The picture of a woman scientist could also be printed alongside. Out of the 3 authors only one is a woman, instead 2 men and 2 women authors should be included. The editorial board has only men editors, women editors should also be included. Inside back page has a picture of vehicles and all are driven by men drivers. Women drivers should also be included to avoid gender stereotyping i.e. only men can drive vehicles, this notion should be avoided.

Unit No.	Page No.	Observation	Suggested Alternatives
Unit I 1.1 History and Scope of Science	1	The word man is frequently used in 2 nd and 3 rd paragraphs.	The word human being can be used.
	1	4 th paragraph only names of men scientists are mentioned. Not even a single woman scientists name is mentioned.	Mention should be made of famous women scientists also.
	7	Photographs of eleven scientists with a write up of their contributions is clearly mentioned. Not a single women scientists photograph is printed.	Should be clearly mentioned and write up on the contributions should also be included.
1.1	5	Under Points to Remember, once again man is mentioned.	Instead the word human being should be mentioned.
1.6 Classification of plants and animals.	17	Paragraph one man is mentioned.	Instead the word human being can be used.
	21	On this page, the picture of boy is observed, why not girl also.	Picture of boys and girls should be printed.
2.2 Useful micro- organisms.	29	Paragraph 2, man is mentioned.	Should make it human beings.
2.3 harmful micro- organisms	33	Paragraph 1, man is mentioned.	Should make it human beings.
2.3.2 Viral Diseases	35	The word viral diseases in (MAN) is used.	Should make it human beings.
2.3.3 Bacterial Diseases in Man	37	The title of the topic itself mentions man.	The title should be changed to viral diseases in human beings.
2.3.3	38	Para 5. The word man is used.	Human being is a better word.

	40	Last line, man is used.	Human being is a better word.
3.1 Useful plants and animals	54-55	Nine times the word man is mentioned.	Human being is a better word.
3.2 Wild and Domesticated animals	58-59	5 times the word man is mentioned.	Human being is a better word.
	60-61	3 times the word man is mentioned.	Human being is a better word.
3.3 Economic Importance of plants	63-66	3 times, the word man is mentioned.	The word human beings can be used instead.
3.4 Economic importance of Animals	69-71	3 times the word man is mentioned.	The word human beings can be used instead.
3.4.3 Economic importance of some more animals.	76-77	Twice the word man is mentioned.	The word human beings can be used instead.

Biology Text – Class IX Telugu Medium 2001 Publication

Subject : Biology

Class : ix

Medium : Telugu పుస్తక రచయితలలో ఇద్దరు పురుషులుగా ఇద్దరు స్త్రీలు ఉండడం మంచి సరికొత్తం డిజైన్, సంఘాదకులు, సంఘాదక వర్ణం మరియు చిత్రపటం ఆ ఆరుగురు పురుషులలో కొను సంఘాదక వర్ణం సగం మండ్రెనా (స్ట్రోబ్ ఉండేదిట్లు చీనుడు డివైజం.

Unit No.	Page No.	Observation	Suggested Alternatives
1.6	36 (2 nd para, last line)	జంతువులలో (మానవులలో కూడా) పునరీ ఈ నాలుగు కణజాలాలు	"మానవులలో కూడా" నేని bra KE 13 లో చేర్చినవసరంలేదు. చేర్చినా డిజైన్ అరకరం కాదు.
2.7	66 (4 th para, 5 th line)	మానవునికి సెల్యూలోస్ ను జీర్ణం చేసుకుని శక్తి లభిస్తుంది.	No need of correction.

3.1.7	116 (2 nd para, 2 nd line)	ಮಾನವರು ಆರೈಕೆ ಲಾಭಂ ಯೊಂದುನುಡು.	ಮಾನವರು ಆರೈಕೆ ಲಾಭಂ ಯೊಂದುನುಡು.
3.2	120	ಜಿಂಟುವುಲಕನು ಯಾನವುಡಿ ಯಕುಕಿವಗಾ ಡಿಪಯೊಗಿಸ್ತುಡು	ಜಿಂಟುವುಲಕನು ಯಾನವುಡಿ ಯಕುಕಿವಗಾ ಡಿಪಯೊಗಿಸ್ತುಡು
4.5	140 (4 th para, 1 st line)	ಮಾನವರು ಒಕಿಡಿ ನಿಟ್ಟು ಡಿಪಯೊಗಾನಿ ಲಿಲಸುಕುನುಡು	ಮಾನವರು ನಿಟ್ಟುಡಿಪಯೊ- ಗಾನಿ ಲಿಲಸುಕುನುಡು
6.1	190 (last para, 1 st line)	ಮಾನವರು ಯಕಿಡಕು ಯೆಳ್ಳೆನು. ಯೆಕಿಲನು ಅನಲೆ ಕುಡಾ ಲಿಸುಕು ಯೆಳ್ಳೆನು.	ಮಾನವರು ಯಕಿಡಕು ಯೆಳ್ಳೆನು. ಯೆಕಿಲನು ಅನಲೆ ಕುಡಾ ಲಿಸುಕು- ಯೆಳ್ಳೆನು.

Biology Text – Class IX

Medium English (2005 Publication)

Out of four authors, two are men and other two are women. But among the list of editors and chief editorial board, all of them are men. Among the list of 5 editorial board members, at least two of them are to be women staff.

Unit No.	Page No.	Observation	Suggested Alternatives
1.6	31 Animal Tissues – 3 rd line	Four kinds of tissues in animals (including man).	Four kinds of tissues in animals including human being.
2.7	56 last para 4 th line	Man has no capacity to digest cellulose.	Cellulose cannot be digested by human being.
2.8	59 4 th para, 1 st line	There are four types of teeth in man.	There are four types of teeth in human being.

2.8.6	66 Exercise, 1 st question	What are the parts of the digestive system of man ?	What are the parts of the human digestive system ?
2.9.1	68 (2 nd para, 2 nd line)	While frogs and man excrete urea.	While frogs and mammals including human being excrete urea.
2.9.3	72 (in Heading)	Excretory Organs in Animals and Man	Instead of that "Excretory organs in Animals" is enough.
2.9.3	73 last para, 1 st line	In man, kidneys are the chief excretory organs. Lungs and skin also help in excretion.	Besides lungs and skin, kidneys act as chief excretory organs in human being.
2.9.3	78 In activities, first one.	On a wooden plank, prepare the model of kidney of man.	Prepare the model of Human Kidney.
2.9.3	78 (2 nd question)	Describe the structure of kidney of man.	Describe the structure of human kidney.
2.9.3	78 (Fill up the blanks (stone)	Kidneys in man arein function.	Kidneys arein function.
Unit 3 3.1.1	79 (first line, 1 st para)	All living organisms, be a plant, animal or man, a micro organism.	All living organisms, be a plant, animal, human being or a micro organism.
3.1.1	79 (first line, 2 nd para)	Man, like all other living organisms.	All living organisms, including human being are dependent.
3.1.1	79 (2 nd line of 2 nd para)	Primitive man was competing with other animals, as man developed tools, started agriculture.	During primitive periods, human being was competing. As we developed tools, started agriculture.
3.1.1	79 (7 th line of 2 nd para)	In recent years, man has become aware of this	In recent years, we are aware of this
3.1.2	81 (2 nd line in 2 nd para)	Almost 70 to 75% of total body weight of all living organisms, including man, is due to water.	Almost 70 to 75% of total body weight of all living organisms is due

			to water.
3.1.2(b)	85 1 st line 4th para.	Nitrogen is one of the important constituents of all living organisms from bacteria to man.	"Nitrogen is one of the important constituents of all living organism" is enough.
3.1.3	91 First line	He derived a special apparatus.	A special apparatus was devised in which prebiotic conditions were created.
3.1.4	92 (5 th para, 3 rd line)	These animals or plants are collected and these elements are extracted by man.	"These animals..... are extracted" will be OK.
3.1.5	94 3 rd para, 2 nd side heading.	Man-made causes of soil erosion.	Other – causes of soil erosion.
3.1.5	96 Fill up the blanks (5 th one)	The man made causes too	Other causes for soil erosion.....
3.1.6	97 (last line, 2 nd para) 2 nd , 3 rd lines in 3 rd para.	No man made industry can do this.	No industry can do this.
3.1.6	99 (3 rd line)	Most of the meat requirements for man is obtained.	In the sentence, "for man" can be deleted.
3.1.7	101 (2 nd para, 3 rd line)	Only few hundreds are being used by man.	In the sentence "by man" can be deleted.
3.1.7	101 (1 st line , 3 rd para)	Unfortunately.....past several years.	Unfortunately, either knowingly or unknowingly the wild life was destroyed in past years.
3.1.7	101 (4 th para, 6 th line)	As a result,man realised their importance.	"As a result, several animal and plant species have permanently disappeared from the face of earth" will do. In addition, new species of animals and plants were

			introduced in areas where they were originally absent.
3.1.7	101 (5 th para, 1 st line)	Fortunately, man has realised this mistake.	Fortunately the mistake was realised before it was too late.
3.2	104 (1 st para, 7 th line)	No animal or plant uses up these resources as man does.	No animal or plant uses up these resources as human being does.
4.5	119 (3 rd para)	Man requires. Man has modified. How man has exploited.	Human being receives. Human being has modified how human race was exploited.
4.5	119 (4 th para)	Unlike all other animals, man is the only	Unlike all other animals, human being alone can make fire and use fire.
5.4	157 (Points to remember)	Pollution may occur due to natural and man-made causes.	Pollution may occur naturally or due to human activity.
5.4	157	Particulatenervous system in man and in animals.	Particulatenervous system in animals and in human beings.
	153	This causes deatheven manallergic conditions in man.	This causes death of the times and even human beingsallergic conditions in human being.
	161	In contrast, man-made selection	In contrast, artificial selection is the relation made by human beings.

Biology Text Class X

Subject : Biology

Class : X

Medium : Telugu (1998 Publications)

Unit No.	Page No.	Observation	Suggested Alternatives
1.3.3	19 (last para)	సోరశక్తి ఉపయోగించి ... మానవుడు ... అయినా చేయలేకపోయాడు.	సోరశక్తి ఉపయోగించి ... మానవుడు ... అయినా చేయలేకపోయాడు.
1.9.13	61	శివోపద్యవస్త్ర కదలికల్లో పురుషుల ఉదరవిభాగం (పొట్ట) పొట్ట అవసరం చేయాలి. (స్త్రీలలో పొట్ట ఉండకపోవడం అవసరం ఫి పొట్ట అవసరం).	The concept itself is wrong. Better consult a doctor and make necessary corrections.
1.9.2	61 (Table 1.9.2)	25 సంవత్సరముల పురుషుడు 50 సంవత్సరముల పురుషుడు	25, 50 సంవత్సరముల మనుష్యులలో
	64 (Exercise 18 Multiple choice)	పురుషుల్లో శివోపద్యవస్త్ర ...	Wrong concept
1.14	109	జొక్, జార్జి నేపాలీలు. జొక్కు పొట్ట ఉండకపోయింది ...	జొక్, జిల్ నేపాలీలు. జొక్కు లొక్కున జిల్ నేపాలీలు. జొక్కు నొక్కు ముందు కొద్దినట్లు ఉంటే జొక్ బాగుంటుంది.

Subject : Biology

Class : X

Medium : English (2006 Publications)

All the 2 authors and 2 editors along with artists are men. At least provision for women authors and editor should be there. On the cover page, figures should be correct and proportionate. Along with lion, the figure of lioness can also be added.

Unit No.	Page No.	Observation	Suggested Alternatives
1.2.1	6	Experiment to show that CO ₂ is necessary for photosynthesis.	The name of the scientist Moul's (half leaf experiment) can be added.

1.7	21 (last line)	From microbes to man.	From microbes to human being.
1.3.3	14 (last line) 4 th para – 5 th line	For all the organisms (including man)	There is no need to mention "including man" even in brackets.
1.9	32 (3 rd para – 3 rd line)	In man respiration is carried on by lungs.	Respiration is carried on by lungs in human beings.
1.9.6	40 (under the figure)	Respiratory passage in man.	The word Human Respiration was aptly used in remaining matter. But underneath the figure, Respiratory passage in Human being.
1.9.7	41 (underneath the figure)		
1.9.8	42 (underneath the figure)	Bronchioles and alveoli in man. Lungs in man. Respiration in man occurs in 2 stages.	Bronchioles and alveoli in human respiratory tract. Human lungs Human respiration occurs in 2 stages.
	43	Inspiration and expiration in man. Exchange of gases in alveoli in man.	Inspiration and expiration in human being. Exchange of gases in alveoli will do.
1.9.10	44 (1 st para)	In man, diaphragm plays a major role in the respiration while in woman, the ribs play a major role.	Check it through consulting a doctor and then correct it if it is necessary.
1.9.2	44 (Table)	Man of 25 years, Man of 50 years	Person of 25 years Person of 50 years
1.9	47 (Fill up the blanks) (13 th and 19 th dashes)	The scientific name for the wild life of man is ----- 'C' shapedof man.	The scientific name for the wind pipe of human being is "of

			human being.”
1.12	73 (4 th) Multiple Choice (5 th)	In man, Superior Rena cava..... Rena cava in man opens into	“In man” can be deleted and “Superior rena cava opens.....” will do. “Rena Cava of human beings opens into” to be corrected.
	75 (Fill up the blanks) 6 th and 12 th	The largest artery in the body of man The normal blood pressure in man is	“The largest artery in human being is” The normal blood pressure of a human body is
1.14	86	Jack and George are friends....	Jack and Jill are friends. It will be apt if Jill comes forward to donate blood.

GUIDELINES TO THE WRITERS OF THE TEXTBOOKS
OF DIFFERENT SCHOOL SUBJECTS

TELUGU

పాఠ్యపుస్తక సంపాదకులు మరియు రచయితలు క్రింది
సలహాలను పాఠించాలి:

- గర్భమరియి వచ్చి బాగుంటుంది అంటే కేవలం వచ్చే
క్రింద రచయితలకు కూడా సమాన స్థానము కల్పించాలి.
- పాఠ్యపుస్తక ప్రాథమిక మరియు అకరి పిల్లలైతే క్రమం
వారు పురుషుల అక్షరాలు ఉన్నట్లు వ్రాయాలి.
- రామయణం, రామకాండ, బుద్ధుని పరే బోధనల వ్రాయు మరియు
స్త్రీల మరియు సాహిత్యం (చిచ్చు ముసుగు పాఠ్యపుస్తకాలు మరియు
వారి బోధనలకు సమాన స్థానము కల్పించాలి.

ENGLISH

Teaching of English or any language for that matter, in the context of gender parity and gender justice involves the following issues.

- To see that the language used as part of texts or as part of exercises do not show gender discrimination.
- To see that the examples given to teach various grammar topics do not reinforce gender stereotyping.
- To see that the selections for the language texts show gender parity and gender equality.

Guidelines to the Writers of the English Textbooks

The editors of the textbooks may be asked to keep the following issues in mind while selecting the text and preparing exercises for the text.

- To avoid words reflecting gender bias like 'mankind' to represent the entire humanity and also the use of pronoun 'he' for gender neutral words like 'doctor', 'driver, etc.
- To show gender equity in the pictures given to support the content.
- To avoid examples which reflect gender stereotyping like "mother is cooking", "the pretty girl".
- To include selections in women and by women which reflect women's views and concerns.
- To refer to women by their first name but not as Mrs.Sarma, etc.
- To have some women to be a part of the editorial board in writing of the textbooks.

HINDI

उपर्युक्त कार्यक्रमानुगत आन्ध्रप्रदेश के कक्षा ८, ९, १० की हिन्दी पाठ्य पुस्तकों का अवलोकन किया इस में बहुत सारी महिला विषयक बातें देखने को मिली। जिसका विवरण दिया जा रहा है।

१. लेखक
२. सम्पादक
३. पत्रलेखन
४. नीति-दोहे
५. विभिन्न चित्रर
६. विभिन्न वाक्य
७. वैज्ञानिक
८. महिला सन्त
९. महिला लेखिका

उपर्युक्त शीर्षकों से सम्बन्धित विषय पुरतकों में है जिनके बदलने की आवश्यकता है। कुछ पाठ बदलने की आवश्यकता है, विवरण में लिखा है। तथा ८, ९, १० कक्षाओं की पुरतकों में विभिन्न पाठों में प्रयुक्त वाक्यों, विचारों, स्थलों पर परिवर्तन की जरूरत है।

अतः उपर्युक्त विभिन्न विषयों में महिला की प्रधानता, व शब्दों को जाड़ना, प्रसंगानुसार नया शब्द करना नूतन चित्रों में महिला को स्थान देना आवश्यक है तथा निर्दिष्ट किया गया है। समयानुसार नूतन पुस्तक में परिवर्तन किया जा सकता है।

SANSKRIT

Guidelines to the textbook writers

- While selecting texts from original works care should be taken to select non-controversial issues.
- In pictures – both boys and girls pictures will have to be depicted.

- In lessons like drama, dialogue, the roles may be played by both boys and girls.
- In editorial board, atleast two women should be included.
- Dramas written from modern women writers may also be included.

Social Sciences

Social Sciences is one of the curricular areas in school education. It draws its content from history, geography, political science, economics, sociology and anthropology and intends to enable students to develop a critical understanding of the society. The social sciences also carry a responsibility of creating a strong sense of human values and generating in students a critical, moral and mental energy to make them alert to the social forces that threaten those values.

In the following pages, an attempt has been made to analyse the Social Sciences textbook in use of class VIII, IX and X of Andhra Pradesh, keeping in mind the gender issues. The Table SS8.1, SS9.1 and SS 10.1 give the details and also specific suggestions for improving the textbooks by modifying the ways of presenting the gender issues indirectly and their convincing treatment in various contexts.

Based on the analyses of the Social Science textbooks and the Focus Group Report on Gender Issues in Education, a few guidelines have been drawn for strengthening the hands of the textbook writers in dealing with gender issues.

Guidelines on Gender Issues

*** Avoid Gender Discrimination**

Gender discrimination is obviously seen throughout the textbook. For example, while discussing about freedom struggle of India, though many women have participated in the struggle, the lesson indicates only Anne Beasant and Arundale. But there is a need to give greater description.

- * **Avoid Masculine terms and use neutral terms if it applies to both the genders.**

In many of the civics lessons, the head of the government is indicated by 'he' which can be replaced by 'person' or he/she.

- * **Gender equality to be shown**

While drawing the pictures wherever possible show both the genders almost equal in number and give equal treatment. For example, in the diagram of State Executive all members seem to be 'men' and there is a need to depict women also.

- * **Provide Gender Justice**

Though men and women take responsibility in the society, the work done by men are enumerated but not of women. For example, the lesson on cultural heritage of India gives the detail description of contributions of men only. It is also necessary to find out and write about the work done by women also.

MATHEMATICS

School Mathematics is accorded a pivotal place in the school hierarchy of subjects, but it is generally considered to be abstract. It is treated as a subject with lots of axioms and theorems, rules and methods which requires a lot of skills and applications. Mathematics appears to be value free and an exact science which reflects reasoning and thinking but in reality it is also 'masculine dominated'.

In order to make school textbooks gender-inclusive and gender-sensitive, a detailed textbook analysis of the Andhra Pradesh High school textbooks (EM and TM) was undertaken. The following section presents a detailed description of each gender issue reflected in NCF 2005 with suggestions and alternatives.

Guidelines of Writers of Mathematics Textbooks

1. **Gender Blindness (Invisibility) needs to be avoided.**

The mathematics textbooks have reference/ preference to masculine gender but a very limited reference to feminine gender. It is noticed that the problems very

rarely refer to women and it appears that they are non-existent. This trend needs to be altered.

2. Gender stereotyping needs to be avoided.

The textbooks cast males as strong (physically), active and work oriented and in contrast portrays females as pretty, less active and saving oriented.

3. Language bias has to be paid special attention

The language used in Mathematics textbooks needs to be modified to make it gender fair. The textbooks especially in Telugu medium refer to the learner as 'he'. Pupils/ Students are also referred to as 'he', workers as 'men'. This sort of 'masculine' bias needs to be avoided. The exclusive use of masculine terms and pronouns, ranging from our forefathers, mankind and businessman, trader, labourers to the generic 'he', denies the full participation and recognition of women.

4. Inclusion of Women Mathematicians is recommended.

The contribution of women mathematicians needs to be emphasised. It is said that not a single woman mathematician's contribution has been mentioned in any of the three textbooks. A serious effort needs to be made to identify and include the same.

5. Everyday applications with gender sensitivity has to be incorporated.

The processes underlying everyday mathematics done by women within the home (like Rangoli) and outside (in the market place) needs to be included.

6. Care to be taken to avoid Gender Discrimination

In presenting real life applications, care should be taken to present issues without discrimination. For example, problems showing fathers being more capable than mothers or fathers doing work faster than mothers should be discarded.

Physical Sciences

The subject of physical sciences plays an important role in providing the basic fundamentals of the subject like universality, experimentation, cause-effect relationship, observation, objectivity and so on. From this point of view the analysis of the textbooks – which acts as guides to the teacher for all transactional purposes was carried out and necessary guidelines are provided herewith. The information or the subject knowledge provided in these textbooks should be free from any bias and provide the basis for inculcation of right attitudes among the children. Only with this intention, the subject of Physical Sciences was included as one of the school subjects particularly at secondary level. Moreover the adolescent children should inculcate that all are equal in all respects. Only with this intention the Physical Sciences textbooks of classes VIII, IX and X of Andhra Pradesh state (both Telugu Medium and English medium) were analysed and the guidelines are suggested to the textbook writers. Though the subject of science is to be value fair and an exact science includes reasoning, logic and thinking, in practice it is not like that. This subject is also 'male dominated' if it is critically analysed. A detailed description of analysis is presented in the following pages with a few suggestions and alternative version for the actual wording/ language used in these Physical Sciences textbooks. The examples given are pictorial representation of the ideas as shown in these textbooks. The analysis also includes how the male and female characters are depicted and how these things can be modified from gender inclusive perspective and to remove gender stereotyping as per the change that are being taken in our environment and society as such. Even the students should be aware of all the changes around them and these textbooks should transmit and act as real models in formulating the right concepts among the learners.

Guidelines to the Writers of Physical Science Textbooks

1. Gender Blindness (Invisibility) should be avoided.

The textual matter of Physical Science textbooks contains more masculine reference but not feminine. It is observed that whenever there is explanation or an example for a particular concept, in most of the places male reference is given and

not even 5% of the instances are of females, which indicates that women constitute very less. Thus this aspect is ignored. This tendency should be changed wherever it is possible.

2. Gender Stereotyping should be avoided.

Women are shown as mother-child, housewife, which are traditional roles. Moreover, there is no need to mention the women in those examples. This may be taken care of.

3. The language bias has to be changed.

In all the Physical Science textbooks all the authors, editors and artists are male people. A few female authors should be involved at the time of textbook writing. Even the language used both in Telugu versions including the preface for teacher, learner are male oriented. This needs modification. The textual matter refers 'he' in most of the places.

4. Inclusion of women scientists along with their contribution is recommended.

Only one woman scientist is included as if there are no contribution of female scientists to the field of Physical Sciences. Women technologists like Empress Shi Dun, Nor Mahal, Helen Griner, Franklin, Maria Michell, Vanitha Rangarajan may be included in any one of the three textbooks of Physical Sciences published by the Government of Andhra Pradesh. These aspects need sincere effort.

5. Care to be taken to avoid discrimination in characters

In portraying male and female characters, women are always depicted in low status positions and men are in high and prestigious positions like king, pilot, astronomer, scientist, physician, etc. whereas women were shown as housewives, churner, etc. This may be avoided.

6. The pictorial representation is unequal.

There are more number of pictures of male/boys whereas very few are of female/ girls. This may be eliminated by including female pictures proportionality.

BIOLOGICAL SCIENCES

Biological Science is one of the subjects in the curriculum. It draws its content from Botany, Zoology and Human Physiology. It intends to enable students to develop scientific temper, keen observation, logical reasoning and valid inference along with critical understanding of technical terms. The technical terms in sciences are difficult by themselves. The impact of Sanskritisation while writing textbooks in Telugu made the tough technical concepts further get complicated.

Hence the easy, equivalent technical terminology is to be given in the text either within the brackets immediately after the word or at the end of the textbook which enables even a “hard – to –reach” students to understand them and arrive at an exact acquisition of knowledge. Biological Sciences possess a responsibility of creating zeal and enthusiasm in students besides the inquisitiveness, in sustaining the scientific thought and in inculcating in students a critical, moral and mental energy to make them alert to know the scientific principles and laws of nature without hindering the value system.

In the following pages, an attempt has been made to analyse the present textbooks of VIII, IX and X classes of both English medium and Telugu medium keeping in mind the gender issues as envisaged in National Curriculum Framework 2005.

Based on the analysis of Biological Science Textbooks and the focus group report on gender issues, some guidelines have been drawn for strengthening the thought and deed of textbook writers in successfully dealing the gender issues.

Guidelines on Gender Issues

The textbook writers of Biological Sciences are requested to consider the following guidelines regarding the gender issues as envisaged in NCF 2005.

* **Avoid Gender Discrimination**

Gender discrimination is obviously seen throughout the books. For example, along with portraits, life sketches and contributions of men scientists, the available contributions of women scientists are to be mentioned.

* **Avoid usage of masculine form of the word and use neutral terms if it applies to both the genders.**

Instead of, In a man aged about 25 years

In a person aged about 25 years will be good. The often used word 'He' can be replaced by 'person' or 'human being'.

* **Gender equality has to be observed.**

While drawing the pictures wherever possible and necessary, show both the genders and give equal treatment.

* **Provide Gender Justice**

Though men and women take equal responsibility in constructive and destructive activities, they were tagged to men but not to women.

GENERAL GUIDELINES

- Brief the textbook writers on NCF 2005 and *Gender Issues* to be taken up in the textbooks.
- Let the textbook be gender fair, treating genders equally and not discriminating.
- Stereo type information, pictures to be avoided.
- Try to achieve gender justice and treat both the genders on par with each other.
- Let there be equity in sharing of pictures/ diagrams and content.
- Try to coin gender free terms for Rashtrapathi, Upadhyaya, etc.
- Use gender free terms like Observer, Person or human being instead of 'man' wherever possible.
- Female individuals to be included as authors/ editors/ artists, etc.

Conclusion

The programme on Analysis of Textbooks of Government of Andhra Pradesh in terms of Gender Issues as reflected in NCF 2005 has revealed some important issues which needs the attention of the Government to bring about gender justice. The guidelines suggested by the resource persons in different school subjects of classes VIII, IX and X would surely give direction to the textbook writers in producing textbooks with equal treatment to both the genders and avoiding stereotyping – content, pictures, activities, exercises, etc.